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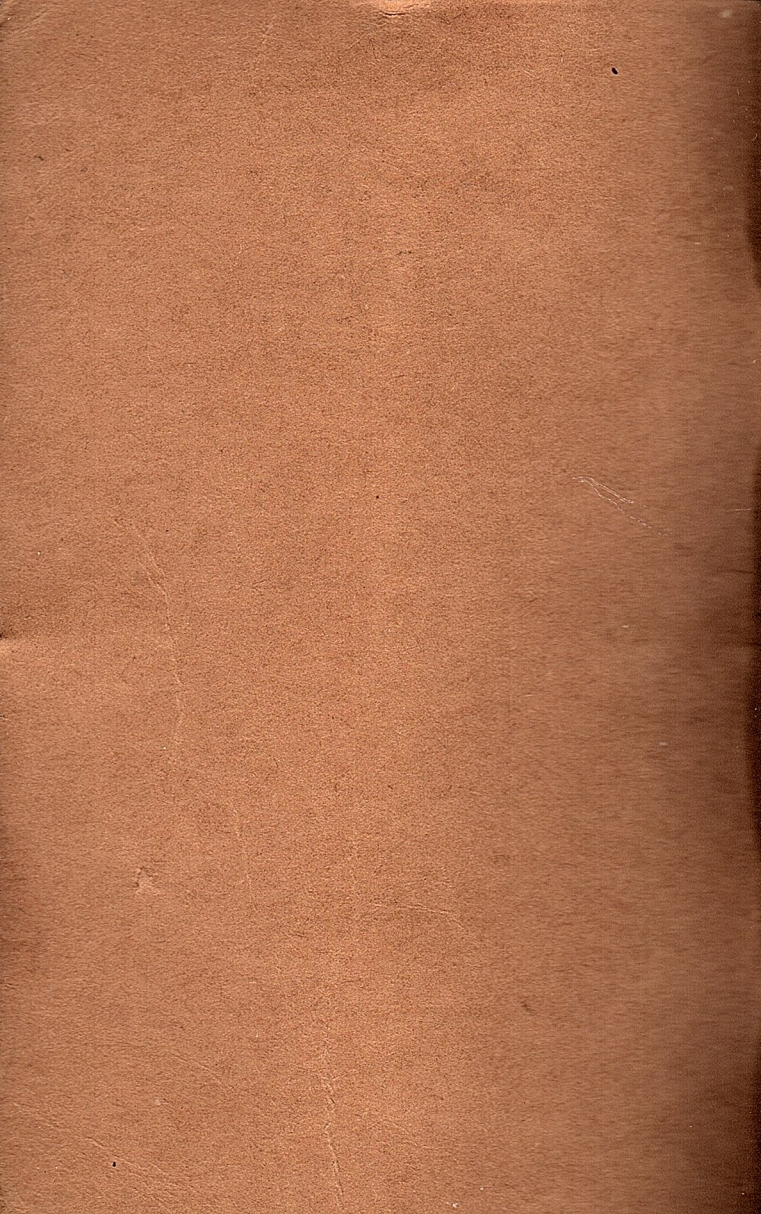
# INFANTRY SECTION LEADING

1938

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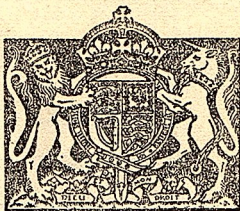
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# INFANTRY SECTION LEADING

1938

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THE WAR OFFICE,  
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# INFANTRY SECTION LEADING

## 1938

### CHAPTER I

#### INTRODUCTION

##### 1. Object of the book

This book deals with the organization and armament of the infantry platoon, the training of its sections in peace and their leading in war.

##### 2. Leadership

1. A leader must first of all have the *confidence* of his *men*, and to gain this he must have confidence in himself. He must be able to make up his mind, and having done so, stick to his decision. He should keep calm. To show doubt and indecision is a sure way of shaking the confidence of his men. A stout-hearted man will always go on trying; and by doing so he will instil his own fighting spirit into his followers.

2. *Loyalty* is an essential of leadership; unless a leader is himself loyal to his superiors, he cannot expect loyal support from his subordinates.

3. Finally, he must understand *discipline*; he must command the men of his section firmly, but with common sense and fairness. He must give his orders clearly and, having given an order, must insist on its being efficiently carried out.

##### 3. Time factor

Time is always a vital factor in battle. By intelligent anticipation N.C.Os. must try to shorten the period of preparation and reconnaissance required before going into action. N.C.Os. should always look ahead and think what the next move is likely to be.

#### 4. Surprise

The element of surprise must never be forgotten. N.C.Os. should try to place themselves in the enemy's position and then avoid the obvious course which the enemy would be most likely to expect. In war every subterfuge, however small, is worth trying.

#### 5. What the section commander must know

Before he can lead his section a section commander must understand the organization of his battalion; he must then learn what are his duties in the field and how his section acts as part of the platoon; and he must have some knowledge of the role of other arms.

### CHAPTER II

#### MAN MANAGEMENT

#### 6. General

The first responsibility of all N.C.Os. is the care of their men. Constant attention should be paid to the following:—

- i. Fatigues must be equally divided. It will be found that some men have a knack of avoiding the most arduous duties, while others undertake cheerfully any task which they are ordered to do. By studying the men under their command N.C.Os. will soon learn their characteristics.
- ii. Junior N.C.Os. have little control over the food which is provided for their men, but they must see that it is evenly distributed. If any man is late for his meals owing to some duty or fatigue it is the responsibility of the section commander to see that a fair portion is kept for him.
- iii. Personal cleanliness is of the utmost importance



Whenever possible men should take regular baths and teeth should be cleaned daily. A dirty skin encourages vermin, which cause abrasions, wounds, blisters, etc., to go septic.

iv. All men must understand the importance of sanitation and the dangers of not maintaining the highest standards in this respect should be impressed on them. All refuse, nightsoil, urine, and kitchen refuse must be satisfactorily disposed of in order to prevent the breeding of flies which provide one of the greatest dangers to the health of the troops. One man of dirty habits with no regard for sanitation may be responsible for the death of many of his comrades from such diseases as enteric, dysentery and cholera.

v. Men should be encouraged to bring any complaints to their section commander who, after investigation, if the complaint is justified, should report the matter to his platoon commander. Men who brood over imaginary wrongs soon become discontented.

## **7. Points which require attention on the march**

### **1. Before leaving barracks, billets, bivouacs, etc.—**

Equipment must be inspected to see that, as well as being in order, it is correctly fitted. Loose, badly fitting equipment causes chafes, and is very tiring if worn for long periods.

### **2. On the line of march.—**

(i) March discipline must be strictly enforced. Men should keep in step and be properly covered off. A steady, even pace must be maintained and no doubling to regain lost distance should be allowed.

(ii) At the hourly halt all men except those detailed for protective duties must take off their equipment (except the respirator) and lie down.

(iii) Sections should change places after each hourly



halt. This prevents the same men marching on the left of the road—probably in the gutter.

- (iv) Indiscriminate drinking from water bottles must be stopped. Men should be allowed to rinse out their mouths during the hourly halt under the supervision of an N.C.O.
- (v) Smoking should be restricted.
- (vi) In hot weather collars of jackets should be undone, and the sections opened out as much as possible.
- (vii) When circumstances permit, singing should be encouraged as this helps to relieve the boredom of the march.

3. *After a march when barracks, billets, or bivouacs have been reached.*—

- (i) If possible, all men should be made to wash their feet, after which N.C.Os. should hold a foot inspection to see that men with blistered feet are attended to. Ordinary blisters can be treated on the spot with iodine and foot-powder, but men with very badly blistered feet should be ordered to report sick to the medical officer.

The N.C.O. should then look to see whether boots fit and are soft; that socks are the right size and free from holes or large badly made darns, both of which cause blisters; if fresh socks are not available, that the dirty ones are changed to the opposite feet.

- (ii) Arms equipment and clothing must be inspected to see that they are in good order. Any deficiencies should be reported at once to the platoon commander.
- (iii) Men should be warned not to drink water from an unauthorized source. They should be shown where clean or sterilized water can be obtained.
- (iv) Finally when his men have been fed, the section commander should see that their sleeping

quarters are as comfortable as circumstances will permit.

4. The good N.C.O. is always in evidence after a really tiring day. While the indifferent leader of men will probably be busy seeing to his own comfort, the good leader will be looking after the comfort of his men.

### CHAPTER III

#### WAR ORGANIZATION

**8. Organization of an infantry battalion.**—A battalion consists of:—

Headquarters.

Headquarter company.

4 companies.

**9. Headquarter company.**—Consists of:—

No. 1 Platoon—Signals.

No. 2 Platoon—Anti-aircraft and ground defence.

No. 3 Platoon—Mortar.

No. 4 Platoon—Carrier.

No. 5 Platoon—Pioneer.

No. 6 Platoon—Administrative.

**10. The company.**—The organization of each of the remaining four companies is as follows:—

Company H.Q. and 3 platoons.

Company H.Q. consists of:—

Company commander.

Second-in-command.

Company serjeant-major.

Company quarter-master-serjeant.

Corporal            motor mechanic.

7 Privates        2 batmen.

1 clerk.

1 storeman.

3 orderlies.



**11. The platoon.**—Each platoon consists of:—

Platoon H.Q. and 3 sections.

Platoon headquarters: Commander.

Serjeant.

One orderly.

Batman (in platoons commanded by an officer).

2-in. mortar personnel (2 men).

**12. The section.**—Each section consists of:—

N.C.O. section commander and 7 privates.

**13. Section equipment.**—All carry 50 rounds S.A.A. in pouches. All carry rifles with the exception of the man carrying the L.M.G.

Magazines will be carried as ordered by the section commander.

The above is the normal allotment of equipment which may be varied according to circumstances, but everyone in the section must be trained to fire the light machine gun and anti-tank rifle.

No spare barrel will be carried with the gun during movement. In defence, if the light machine gun is required to fire on fixed lines the tripod mounting must be used. One man will be responsible for erecting the tripod. In defence he will carry a spare barrel and will assist the firer to keep the gun in action.

**14. Personal equipment.**—Each man has a haversack and pack.

i. The *haversack* will be worn on the back and should normally contain:—

Water bottle.

Mess tin.

Emergency ration.

Knife, fork and spoon.

Cardigan (when not worn).

Waterproof sheet or cape anti-gas under the flap of the haversack.

ii. The *pack* will usually be carried on the platoon truck and will contain:—

1 pr. socks.  
 Cap comforter.  
 Soft cap.  
 Holdall.  
 Soap.  
 Towel.  
 1 pr. laces.  
 Greatcoat.  
 Housewife.

**15. Motor transport.**—Each platoon has its own 15-cwt. four-wheeled truck, and is therefore a self-contained, tactical unit, complete with weapons, ammunition and tools.

## CHAPTER IV

### WEAPONS AND THEIR CHARACTERISTICS

#### **16. Light machine gun**

1. The chief characteristic of this weapon is its power of delivering a volume of accurate fire with the employment of few men. It can be fired from bipod mounting, when one man can maintain the gun in action, or from tripod mounting when two men are required. When the tripod mounting is employed the gun can be laid on fixed lines. The term fixed line implies that a weapon is so arranged during daylight that it can by the use of an aiming lamp or mark continue to fire in a certain direction when the aim of the firer is obscured by darkness, etc. When the tripod is in position for fire on a fixed line the gun can be removed and used on its bipod mounting to engage other targets. An extra leg is embodied in the tripod for use as an anti-aircraft mounting.

2. **Fire effect.**—The gun has two different types of fire:—

- i. *By single rounds.*—Full use should be made of the gun's ability to fire single rounds, as by this



method it is possible to save ammunition and conceal the presence of the gun until a satisfactory target appears. Surprise effect can thus be obtained.

- ii. *Automatic*.—When employed as an automatic weapon it should be fired in bursts of four to five rounds from the bipod. Bursts of this size avoid over-heating, strain to mechanism and excessive expenditure of ammunition, but at the same time produce sufficient volume of fire to make observation possible.

It is a very accurate weapon which permits of only a small margin of error in aiming and range estimation.

**3. Ammunition.**—Magazines are carried in pouches attached to the equipment. Men should not be required to carry more than three magazines for long distances.

**4. Anti-aircraft.**—When the light machine gun is fired from the anti-aircraft mounting, two men are required to operate the gun in action:—

Section commander—Directs and controls fire.

One man Fires and maintains gun in action.

One man Assists the firer to change magazines and keeps the gun supplied with ammunition.

**5. General.**—The light machine gun is the principal weapon of the infantry and, except in cases where the need for extreme mobility outweighs the need for fire power, it should always be carried by sections in action. *All ranks must be experts in its use.*

## 17. Rifle and bayonet

1. Accuracy is the chief characteristic of the rifle which will be regarded as the personal protective weapon of the individual.

2. The bayonet is the weapon for hand to hand fighting. Men who are confident with the bayonet, and

determined to use it, will always win when fighting gets to close quarters. It is often used at night or by patrols and sentries.

### 18. Anti-tank rifle

1. The anti-tank rifle affords a means of protection against enemy light armoured fighting vehicles. It is a single shot, hand operated weapon. Its chief characteristics are:—

- i. Great accuracy and good penetration.
- ii. Comparative lightness and mobility.
- iii. Pronounced flash and muzzle blast.

The anti-tank rifle is an easy weapon to handle and fire against stationary targets; but for employment against moving targets constant practice and training are required.

2. **Detachment.**—It can be maintained and fired in action by one man, but if the rifle and ammunition have to be carried for any distance they constitute a two-man load.

3. **General.**—The anti-tank rifle is essentially a weapon of surprise and requires careful concealment. It is not, however, a specialist weapon and all ranks must be trained to fire it. It should always accompany the platoon, except at night with a fighting patrol when it may be unnecessary.

### 19. 2-inch mortar

1. The 2-inch mortar fires a 2-lb. bomb, either smoke or high explosive. It is chiefly used as a smoke producing weapon for offensive action. It is small and easy to conceal.

2. **Carriage.**—Two men are required to carry it and its ammunition; they can change over loads when required.

3. **General.**—The 2-inch mortar forms a reserve of fire power in the hands of the platoon commander. In attack it will be kept well forward, prepared to come into



action at a moment's notice, to assist in maintaining the momentum of the attack, by neutralizing the fire of hostile posts which are holding up the advance of the leading sections. It is of little use at night.

## 20. H.E. grenade

1. The grenade can be thrown by hand a distance of 25 to 35 yards. Large fragments may have sufficient velocity to inflict wounds up to 100 yards or more, particularly if the burst is on stony ground. The thrower should therefore be protected from the explosion.

2. Grenades are particularly useful:—

- i. In street fighting, for clearing houses, etc.
- ii. In uncivilized theatres of war, against an enemy who takes cover in caves or behind rocks, etc.
- iii. In trench to trench fighting.

## 21. Battalion weapons

In addition to the company weapons mentioned in preceding sections, the headquarter company has the following:—

i. **3-inch Mortar platoon.**—The 3-inch mortar fires a 10-lb. bomb which may be either high explosive or smoke.

(a) *Carriage.*—Each mortar is carried in a 15-cwt. truck. It may be divided into three loads and be carried for short distances by members of the detachment. Their movement, however, will be slow and the provision of ammunition will be difficult.

(b) *Night firing.*—The mortar can be laid on fixed lines for firing at night, but owing to the varying effect of wind, accurate fire cannot be relied on.

ii. **Carrier platoon.**—Its armour, speed and cross-country performance enable it to cross bullet-swept country without undue casualties, and

it can protect itself against armoured cars with its anti-tank rifles.

The purpose of the carrier is to move the L.M.G. and crew to a fire position from which the gun can be fired on the ground. The gun will only be fired from the carrier in cases of emergency.

(a) In *attack* it is available:—

- (i) In a tank attack to advance rapidly from fire position to fire position to give close support to tanks unaccompanied by infantry.
- (ii) To assist the advance of riflemen by the infiltration method.
- (iii) To protect flanks.

(b) In *defence* it will be used:—

- (i) To move fire power within the position from place to place, i.e. to produce counter-attack by fire only.
- (ii) To support tank and infantry counter-attacks.
- (iii) Provided that it can be done without detriment to (i) and (ii) to provide depth to the defence by fire at long range, working for the purpose grouped.

(c) In withdrawal this platoon will normally act as rear party or covering troops on the move and halted.

(d) During the gaining of contact phase its primary role will be the protection of its own unit.



## CHAPTER V

### SUPPORTING ARMS AND WEAPONS

#### 22. General

1. Though infantry may sometimes fight without the help of other arms, the co-operation of the latter is usually necessary to achieve success.

The section commander must therefore know:—

- i. The general characteristics of other arms and what assistance they can give him.
- ii. What he can do to help them to give this assistance.

2. The arms and weapons considered in this chapter are:—

Cavalry and armoured cars.  
 Artillery.  
 Machine guns.  
 Tanks.  
 Anti-tank guns and anti-tank mines.  
 Aircraft.

#### 23. Cavalry

1. **Cavalry**, either horsed or mechanized, are mobile troops designed for rapid movement.

During an advance the main task of the divisional cavalry (with which infantry are chiefly concerned) is reconnaissance some miles ahead or on the flank of the infantry. It can also be sent forward to secure a position until the infantry arrives. In a withdrawal, its role in addition to reconnaissance, may be to delay the enemy in order to cover the retirement of other troops.

2. Though our own cavalry can be expected to locate any large bodies of the enemy, they cannot guarantee that small bodies will not slip between them and the infantry. They are not therefore a complete guarantee of safety from surprise and infantry is always responsible for its own protection.

3. Enemy mechanized cavalry patrols will reconnoitre to collect information and infantry must be prepared to meet such patrols at any time. Infantry which keeps cool has little to fear from their action. Small arms fire should be directed at the commanders' or drivers' window slits.

4. Road blocks which limit the action of mechanized cavalry and armoured cars are considered in Sec. 79.

## 24. Artillery

1. Artillery can fire high explosive or smoke shells at ranges much greater than those of infantry weapons. The bulk of the artillery support for the infantry will come from the field artillery which is completely mechanized and equipped with the 25-pr. gun-howitzer. The same weapon can fire as a gun when the shell has a comparatively flat trajectory, or as a howitzer when the shell has a very high trajectory like the mortar.

2. The fire of the artillery is normally controlled by an observer in a position known as the observation post (O.P.) with as good a view as possible of the enemy. The observation post is connected by wireless and line telephone to the battery.

3. The artillery tasks most closely affecting the infantry are:—

- i. During the attack to shell or smoke the enemy and thus reduce the effects of his fire, so that the attacking infantry can advance successfully.
- ii. In defence to protect the infantry by fire on areas which cannot be engaged satisfactorily by infantry weapons.
- iii. Where the enemy defences are protected by wire, and no other means of destroying it are available, passages may be cut by artillery fire.

4. Successful artillery support depends largely on the rapid and accurate information which can be sent back by the leading troops.



## 25. Machine guns

1. Machine guns are grouped in mechanized machine-gun battalions equipped with 15-cwt. trucks.

2. The Vickers machine gun can fire with accuracy up to 2,000 yards, and therefore beyond the effective range of the opposing rifles and light machine guns.

Being belt fed and water cooled, it is capable of sustained fire. So long as certain preparations have first been carried out by daylight, accurate fire can be ensured in darkness, smoke or mist, when the gun is fired on a "fixed line."

Owing to the great length of the beaten zone in proportion to its width (e.g. 300 yards long by 5 yards wide at 1,000 yards range) the most effective support is obtained when fire is delivered obliquely or in enfilade.

Though direct fire is the normal and most effective method of engaging a target, machine guns are capable of firing *indirectly*, i.e. when the target is not visible from the gun position.

Being on a fixed tripod mounting *overhead* fire can be employed with safety.

## 26. Tanks

1. Infantry tanks provide the most valuable form of support for infantry, especially in an attack against a prepared position. Owing to their armour being proof against small arms fire, they can precede the infantry, make gaps in the enemy wire and neutralize or destroy his automatic weapons.

When used, they will usually be employed in large numbers.

2. Tanks communicate with infantry by means of flag signals, which should be familiar to all ranks. They are:—

<i>Signal</i>	<i>Meaning</i>
Red, white and blue.	Friendly tank coming out of action to rally.
Green and white.	Opposition neutralized.
	Infantry come on.
Red and yellow.	Out of action. Do not wait for me.

## 27. Anti-tank guns

Certain regiments of the Royal Artillery are equipped with anti-tank guns and are fully mechanized. The gun is a semi-automatic weapon, firing an armour piercing shell which will penetrate the armour of all known tanks at quite long ranges. The shell has a flat trajectory up to 1,000 yards. These guns will normally be used to cover likely tank approaches and will usually be sited in conjunction with anti-tank mines. They will not normally be employed to cover road blocks.

## 28. Anti-tank mines

Against A.F.V. assault anti-tank mines play the same part that barbed wire does against infantry. Anti-tank mines are usually sited to protect localities or to block tank approaches and, like all other obstacles, they must be covered by fire. The infantry will usually be called upon to place the mines in position.

## 29. Aircraft

1. Aircraft may be used for the following purposes:—

- i. To discover the enemy dispositions.
- ii. To direct the fire of the artillery.
- iii. To attack troops on the ground with bombs and machine-gun fire.
- iv. To spray troops on the ground with gas.
- v. To discover and report the position of our own forward troops.

2. All troops must be able to distinguish between our own aircraft and those of the enemy.

When our own aircraft call for information, which they do by firing white signal lights, forward sections must signal their positions in the manner prescribed in orders. Although communication between aircraft and ground is normally carried out by wireless or radio telephony, pilots occasionally wish to communicate by dropping messages. N.C.Os. are responsible that if one of these messages drops in their vicinity it is taken as rapidly as possible to the nearest headquarters.

3. Anti-aircraft protection is discussed in Sec. 77.



### 30. How to help friendly supporting arms

1. In order to give supporting fire when it is needed commanders of supporting weapons *must have accurate information of the positions of both the enemy and our own troops*. The enemy will naturally conceal his weapons as much as possible and the first problem is therefore to discover where they are located. Commanders mainly depend on the forward infantry for their information. Section commanders should, therefore, always try to spot the enemy machine guns and anti-tank guns and send back accurate information as to their positions. Unless this information is accurate and received quickly it will be valueless.

## CHAPTER VI

### FIRE

NOTE.—This chapter deals with the application of fire from the point of view of platoon and section commanders. It is based on Small Arms Training, Vol. 1, Pamphlet No. 2, and it is intended to serve as a handy reference for junior leaders who have already been trained in the subject.

### 31. General

1. It is the duty of all platoon and section commanders to study the ground in front of them from the point of view of fire effect. Having considered how the fire power of the platoon can be most usefully employed, *fire tasks* are given by the platoon commander to his various section commanders. These are known as *fire direction orders*, and they are usually given in defence or in withdrawal rather than in the attack. In the absence of any fire direction, section commanders must use their own initiative.

2. Sections as they manœuvre, whether in attack, withdrawal or when on patrol, will constantly be faced

with fresh aspects of country: As each view appears the section commander should, if time permits, explain the country to his section.

Prominent landmarks should be given names and ranges, etc., worked out, so that the section may become familiar with the country in front of them. Much time will thus be saved in issuing *fire control orders*. These orders are given by a section commander to his men to ensure that the fire of the section is used to the best advantage in accordance with the fire directions which he has received.

### 3. Fire effect depends on the following:—

- i. Selection of the fire position.
- ii. Selection of the target.
- iii. Indication of the target.
- iv. Finding the range.
- v. Whether to use concentrated or distributed fire.
- vi. Clear fire control orders.
- vii. Good fire discipline in the section.
- viii. Due economy of ammunition.

## 32. Selection of fire positions

### 1. A fire position for any task requires:—

- i. A good view of the ground or target to be covered by fire.
- ii. Cover for the section from ground and air observation and from fire.
- iii. Room for the free use of weapons.
- iv. Covered approaches.

### 2. Field of fire.—

- i. *Short ranges and surprise*.—The two principles to remember both in attack and defence are, firstly, that the shorter the range the more accurate is the fire, and, secondly, that the greatest value is obtained from fire when combined with surprise.
- ii. *Long range fire*.—In defence, it may not be desirable to open fire at long range. If ineffective, it may hearten the enemy, and



enable him to protect himself by making greater use of ground and by adopting more suitable formations.

- iii. *Enfilade fire.*—Enfilade fire should be employed whenever possible. This is particularly important for the light machine gun which can fire a number of bullets in a very short time along the same line of fire. An enfilade target thus gives an opportunity of a fair return for the ammunition expended. It is particularly effective when applied along an obstacle.
- iv. *Extent of field of fire.*—In defence, the extent of the field of fire must depend mainly on the ground. A field of fire of 100 to 200 yards will generally be sufficient for forward posts if flanking fire from other sections or machine guns is available, and if surprise can be obtained.

**3. Cover from fire and view.**—Steadiness and accuracy of fire suffer if the men are themselves under fire from the enemy. It is therefore necessary that section positions should be selected with regard to concealment and cover from fire. For this reason, obvious positions, and positions close to well-defined landmarks, should be avoided. The use of ground and cover is dealt with in detail in Chapter VII.

### **33. Selection of target**

- 1. In the attack, if the section is temporarily held up, the section commander must locate targets and engage them on his own initiative.
- 2. In defence, he is given his fire task by the platoon commander. This task will normally be to prevent the enemy crossing a certain area.

### **34. Indication of target**

- 1. To get fire effect, it is essential that section commanders should be able to describe a target so that it cannot be mistaken. This is the most difficult part of fire control and requires constant practice.

2. In the attack section commanders will be mainly concerned with controlling the fire of the light machine gun; this necessitates the fire order being understood by one man only. Little time will be available for elaborate fire orders which *must therefore be kept as short as possible.*

3. In defence, more detailed arrangements are possible and in certain circumstances the riflemen may be required to fire as well as the light machine gunners.

The section commander should first make a detailed study of the ground to his front and point out to his section positions likely to be occupied by the enemy, probable lines of approach, possible points from which the enemy may try to obtain observation, and areas where the enemy are likely to be particularly vulnerable to fire when advancing, such as gaps in hedges where they will bunch, obstacles where they will be delayed under fire, or open spaces which they must cross. He should then indicate the most likely tasks for the different weapons in his section.

**4. Direct method.**—The most simple form of indication is always the best.—An obvious target can often be described unmistakably by what is known as the direct method. *This method should be used whenever possible.* (Example: "Enemy on bridge.")

In slightly less obvious cases the men should be first given the direction in which to look, e.g. slightly, quarter, half, or three-quarters right or left from the general direction in which the men are facing. (Example: "Half right—Enemy crossing gap.")

In both cases the *range* will have been given immediately beforehand in the fire order, and will thus be a further indication of the position of the target.

## **5. Recognition with aids.**—

i. *General description.*—It is impossible to describe some targets by the direct method without fear of mistake, and in such cases the target is described with reference to some other point which all the men will recognize at once. This point is known as a *reference point*.



Starting from this point the men's eyes are led to the target by various aids:—

- (a) Direction (right or left).
- (b) Vertical clock ray.
- (c) Finger method.
- (d) Degrees.

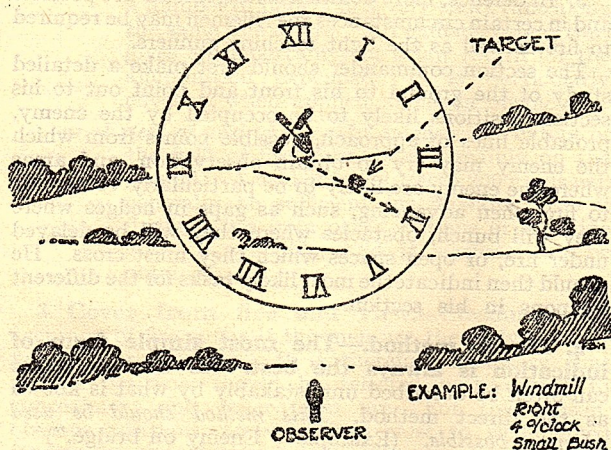


FIG. 1.—Combination of Reference Point and Vertical Clock Ray.

These aids may be used in combination, but the directions must be kept as short and simple as possible.

- ii. *Reference points.*—These must be prominent and unmistakable objects and should be named. If possible, one or two such points, about 20 degrees apart in the arc of fire, should be made known to all the men of the section as soon as the post is occupied.
- iii. *Vertical clock ray.*—This method is used for giving direction from a reference point, and

should only be employed where there is a good view over the ground.

The reference point is taken as the centre of a clock hanging vertically. The direction of any object is first pointed out by its position right or left of the centre followed by the appropriate clock hour. The words above and below should not be used when reference is made to 12 o'clock and 6 o'clock.



FIG. 2.

iv. *Finger method*.—This method is to give the number of fingers the target is to the right or left of a line between the observer and the reference point. The arm must be fully extended and the fingers held in a vertical position. The widest part of the fingers will be used. The reference point and the object should be clearly visible on each side of the fingers.

v. *Degrees method*.—This method is to give the number of degrees the target is to the right or left of a line between the observer and the reference point. Fig. 1 (page 20) shows the use of the clock and degree methods in combination. Degrees should only be used as a last resort when the target cannot be described by any simple method.

The following diagram shows a rough



method of measuring degrees by the various parts of the hand when held at arm's length (Fig. 3):—

### 35. Finding the range

1. A knowledge of the correct range is required to obtain the maximum fire effect. It is particularly

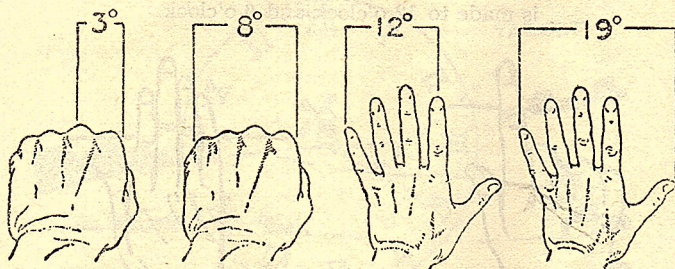


FIG. 3.

necessary in the case of the light machine gun, on account of its close grouping. It is a useful aid for the recognition of targets.

2. The two normal methods of ranging are:—

- i. By observation of fire.
- ii. By judging distance.

3. The principal methods of judging distance are:—

- i. *Unit of measure* (i.e. by measuring the intervening ground in terms of some familiar unit, such as 100 yards). This is only accurate for short distances and when all the intervening ground is visible.
- ii. *Appearance* (i.e. by the appearance of the object in relation to its size and visibility).
- iii. *Bracketing* (i.e. by estimating the largest and the shortest possible distances to the target and taking the mean).

iv. *Halving* (i.e. by judging the distance to a point considered to be half-way and doubling the estimate).

v. *Key range* (i.e. by judging the distance with reference to a known range).

The final estimate can generally be rendered more

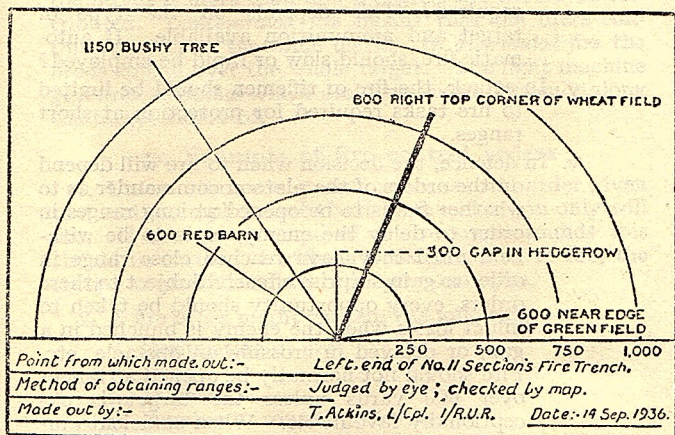


FIG. 4.—Ranges suitable for an infantry section.

accurate by the section commander calling on all the men of the section to estimate the range and then taking the *average*. Wherever possible, ranges should be checked by observation of fire.

4. Estimates made deliberately are much more likely to be accurate than those made in a hurry. Whenever time permits, section commanders will therefore prepare *range cards* (Fig. 4) on which should be marked the ranges of positions likely to be occupied by the enemy or of points which he is likely to pass.

### 36. Factors affecting the opening and type of fire

1. Before opening fire unit commanders must consider the following points:—



i. Is fire justified by the range, visibility and vulnerability of the target, and the possibilities of surprise?

ii. What is the best weapon or combination of weapons to use?

iii. Is automatic fire or fire by single rounds required? This depends on the type of target and ammunition available. If automatic fire, should slow or rapid be employed?

iv. In attack, the fire of riflemen should be limited to fire tasks required for protection at short ranges.

v. In defence, the decision when to fire will depend on the orders of the platoon commander as to whether fire is to be opened at long ranges in order to delay the enemy, or is to be withheld until they have reached close range in order to gain surprise effect. Subject to these orders, every opportunity should be taken to inflict losses when the enemy is bunched in a gap, or delayed in crossing an obstacle, etc. Fire should not normally be opened at ranges over 600 yards unless the target is exceptionally favourable. When sufficient ammunition has been placed in the vicinity of the light machine gun, fire tasks for the riflemen should always be indicated. They will normally be given comparatively short fields of fire, so as to engage enemy who have broken through the fire of the other weapons and are threatening the position from close range.

2. It is conceivable that at any moment the weapons in the section may be required to engage different targets. *For instance:* The light machine gun may be firing at a formed body of enemy advancing along a distant track or road, while the remaining riflemen are engaging some enemy scouts, who have succeeded, by the use of covered approaches, in coming within close range of the position. In these circumstances the section commander must watch the situation as a whole

and be prepared to switch the fire of his weapon as the situation develops.

**3. Concentrated and distributed fire.**—Targets with little width are normally engaged by concentrated fire; wide targets by distributed fire. If the width of the target is more than half a degree, fire should be distributed. *Concentrated fire* means that the firers continue to aim at the same mark. *In distributed fire* the fire is spread over the whole target. The light machine gun fires in bursts which are distributed unevenly along the target indicated.

### 37. Example of fire control orders

1. Unless otherwise stated, a fire control order given to a section implies that the light machine gun only will fire. If the gun is required to fire single rounds this should be stated. If rifles are also required to fire, the section commander must order *gun and rifles*.

2. A fire order might contain the following:—

- i. Designation of unit.
- ii. Range.
- iii. Indication.
- iv. Number of rounds or bursts.
- v. Kind of fire.

**3. When the target is an obvious one and time does not admit of a full fire order, only essentials should be given,** e.g. "Sights down—Enemy quarter left—Rapid fire."

4. Fire orders may be given in anticipation of the movements of our own troops or those of the enemy.

#### Examples:—

- i. *Attack.*—"No. 5 Section—Four hundred—Hedge in front of farmhouse—No. 6 Section is moving up that covered approach on our right—We must cover their advance while they cross that bit of open ground—Await my order to fire."
- ii. *Defence.*—"No. 3 Section—Five hundred—Quarter right—Gap in hedge—The enemy are



closing in towards that gap—When they are bunched there I shall fire—Fire on my order.”

Or

“No. 2 Section—Riflemen only—Three Hundred—Hedge in front of farmhouse—fire when you see a target.” (This is an example of a snapshooting fire order that might be given to the riflemen in defence.)

5. **Arrangements for night, smoke or fog.**—The section weapons must be able to carry out their fire task in darkness, mist, fog or smoke.

### 38. Rates of fire

#### 1. **Light machine gun.**—

##### i. *By single rounds.*

Unit of fire is one round.

Normal fire is five rounds a minute.

Rapid fire is approximately thirty rounds a minute.

##### ii. *Automatic* when fired from the bipod.

Unit of fire is one burst (approximately five rounds).

Normal rate of fire: five bursts a minute.

When fired from the tripod bursts should be from ten to fifteen rounds.

Rapid rate of fire: four magazines (120 rounds) a minute.

#### 2. **Rifle.**—

Unit of fire is one round.

Normal rate of fire: five rounds a minute.

Rapid rate of fire: as fast as a man can fire with accuracy.

### 39. **Replenishment of ammunition**

#### 1. **Section commanders will ensure that:—**

- i. **Ammunition** is economically expended. The amount of fire depends on the importance and size of the target, the range and the cover available for the enemy. In order to save

ammunition full use should be made of the light machine gun firing single rounds.

- ii. An adequate supply of ammunition is available for the light machine gun. In attack every opportunity should be taken of collecting full magazines from the riflemen in the section. In defence all available full magazines must be placed within reach of the gun.
- iii. Whenever a lull in fighting permits, magazines are replenished, from partially emptied magazines, or any charger packed ammunition carried by the section.
- iv. Ammunition of casualties is collected and distributed among men still able to fight.
- v. The platoon commander is kept informed of the ammunition situation. The platoon commander should be warned before a shortage of ammunition becomes acute. It is no good waiting to inform him until the last round has been fired as some time must elapse before fresh supplies can be obtained from the platoon truck or company headquarters.

It must be remembered that one of the main tasks of the men in a section is to supply ammunition for the light machine gun.

2. Section commanders must realize that during movement only approximately 600 rounds are carried for each light machine gun, which would be expended in five minutes of rapid fire. He must, therefore, take early steps for further supplies to be sent forward from the platoon truck. In many types of open country this may be difficult by daylight.



## CHAPTER VII

## GROUND AND FORMATIONS

## 40. Field Signals

1. Control of troops, when deployed, can often be exercised better and more quickly by signals than by verbal orders. Signals are also used for the control of mechanical transport. In this case, verbal orders should be given when they can be easily heard, but whenever engines are running, and always in column of route, all orders will be given by signal.

In controlling troops by signals, a short blast of the whistle (i.e. the cautionary blast) will be blown before the signal is made, in order to attract the attention of the troops. When he is satisfied that his signal is understood, the commander will drop his hand to his side, on which the units under him will act as ordered. Signals should be made with whichever arm will show most clearly what is meant.

Flag signals used by tanks for communicating with infantry are given in Sec. 26.

**2. Signals with the hand.**—The following control signals are used:—

i. *Deploy.*—The arm extended to the full extent over the head and waved slowly from side to side, the hand to be open and to come down as low as the hips on both sides of the body.

If it is required to deploy to a flank, the commander will point to the required flank after finishing the signal.

ii. *Advance.*—The arm swung from rear to front below the shoulder.

iii. *Halt.*—The arm raised to the full extent above the head.

iv. *Retire.*—The arm circled above the head.

v. *Change direction, right (or left).*—The arm is first extended in line with the shoulder. A circular move-

ment is then made, on completion of which the arm and body should point in the required direction.

When troops are halted the above signal means change position, right (or left).

vi. *Right (or left) incline or turn.*—The body or car turned in the required direction and the arm extended in line with the shoulder, and pointing in the required direction.

vii. *Close.*—The hand placed on top of the head, the elbow to be square to the right or left according to which hand is used.

The above signal denotes *close on the centre*. If it is required to close on a flank, the leader will point to the required flank before dropping his hand.

If, when on the march, it is required to halt as well as close, the leader will give the halt signal before dropping his hand.

viii. *Quick time.*—The hand raised in line with the shoulder, the elbow bent and close to the side.

ix. *Double or increase speed (M.T.).*—The clenched hand moved up and down between the thigh and shoulder.

x. *Follow me.*—The arm swung from rear to front above the shoulder.

xi. *Start up (M.T.).*—Circular movement of the hand as if starting an engine.

xii. *Mount (M.T.).*—Two of three slight upward movements with the hand (palm uppermost).

xiii. *Lie down or dismount (M.T.).*—Two or three slight movements with the open hand towards the ground (palm downwards).

xiv. *As you were or switch off (M.T.).*—The arm extended downwards with the hand open, and waved across the body, parallel to the ground.

xv. *Slow down or resume normal speed (M.T.).*—The arm extended to the side level with the shoulder, palm downwards, and moved slowly up and down with the wrist loose.

xvi. *Form line (M.T.).*—The arm waved horizontally



from right to left and back again as though cutting with a sword, finishing with the delivery of a point to the front.

xvii. *Form close column* (M.T.).—The hand raised perpendicularly above the head and lowered and raised several times.

xviii. *Last order completed*.—The salute, followed by the hand raised vertically above the head, hand open and fingers together.

xix. *Right (or left) take ground*.—Hand brought to the shoulder with the fist clenched, and the arm extended sharply in the required direction two or three times. Of use to get M.T. vehicles off the road, when practicable, to avoid enemy aircraft attacks.

### 3. Signals with the rifle.—

The following *communicating signals* are made with the rifle:—

i. *Enemy in sight in small numbers*.—The rifle held above the head at the full extent of the arm and parallel with the ground, muzzle pointing to the front.

ii. *Enemy in sight in large numbers*.—The rifle held as in the previous signal, but raised and lowered frequently.

iii. *No enemy in sight*.—The rifle held up to the full extent of the arm, muzzle uppermost.

These signals may be used by scouts, etc., sent on ahead of their sections. Care should be taken that the signal cannot be seen by the enemy.

### 4. Control by whistle blasts.—

The following whistle blasts are used:—

i. *The cautionary blast (a short blast)*.—To draw attention to a signal or order about to be given.

ii. *The rally blast (a succession of short blasts)*.—To denote *close on the leader* in wood, bush, fog or darkness, when the signal cannot be seen. Men will double towards the sound of the whistle, and rally on the leader, facing in the same direction.

iii. *The alarm blast (a succession of alternate long and short blasts)*.—To turn out troops from camp or

bivouac to fall in, or to occupy previously arranged positions.

iv. *Enemy aircraft in sight (a succession of long blasts).*—Since this signal will often be inaudible, a visual signal will also be used to attract attention, viz. both arms held above the head and the hands waved. On this signal, troops either get ready to fire, open out or take cover, according to the orders in force.

v. *Enemy aircraft attack ended (two long blasts repeated at intervals of five seconds).*—On receipt of this signal all troops resume previous formations. Troops which have been firing will recharge their magazines before moving off.

vi. *Start up and mount or switch off (one long blast).*

vii. *Dismount (two short blasts).*

#### 5. Gas alarm for mechanical transport on the move.—

A motor-cyclist, wearing his anti-gas respirator, will ride down the column, sounding his horn. At night he will halt facing the column and will flash his torch on to his respirator to draw attention. Drivers will halt and respirators will be put on. The column will not resume its march until ordered.

The *All clear* will be given by a motor-cyclist riding down the column wearing his respirator in the *alert* position. If on the move, the column will halt and respirators will be placed in the alert position. The column will not resume its march until ordered.

### 41. Fieldcraft

(Detailed instructions for fieldcraft training will be found in *Infantry Training*, 1937, Secs. 33 to 36.)

1. The term fieldcraft includes **initiative**, **cunning** and **intelligence** in the use of ground so that a soldier may arrive on his objective alive and fit to fight.

2. Owing to the wide extensions and the consequent lack of personal supervision by commanders, the individual must possess to a high degree the art of using ground.



3. The section commander must study ground to see how it will affect either himself or the enemy in providing:—

- i. observation points,
- ii. fire effect,
- iii. cover from view,
- iv. protection from fire,
- v. obstacles to movement.

He should understand the effect on his movements of different types of country (i.e. forward and reverse slopes, woods and villages), and also the effect of weather conditions. He should study the means of keeping direction, and should know how to work in darkness, fog and smoke. Finally, he should realize how conditions of ground and visibility will affect the formation of his section.

4. In deciding what route to follow he must decide:—

- i. The point to make for.
- ii. The route to follow.
- iii. The speed at which to move.

5. In order to reach his objective the section commander may frequently have to make for intermediate points.

6. The ideal line of advance provides adequate protection from fire and cover from view throughout its length, and at the same time offers good fire positions or positions of observation on the way. To get concealment and protection it is usually necessary to use low ground, but high ground normally provides better positions from which to observe or fire. It is comparatively rare to find a route in which these advantages are combined. The section commander in making his choice must remember that a section should advance as long as possible before halting to open fire. Thus it is usually best to follow the route giving the more concealed line of approach. Observation points on the way are of value for noting the progress of friendly troops co-operating in the advance as well as for observing the enemy's position.

7. In deciding the speed at which to move the section commander will be guided by the urgency of his task, which will probably have been given him in his orders. He should aim at getting his men on their objective in a fit condition both to handle their weapons and use their wits.

## 42. Cover from view

1. **Types of cover.**—Some of the chief types of cover are:—

- i. *Undulating ground.*—This form is the least obvious, and considerable experience is necessary before its possibilities are fully appreciated. When skilfully used, it may give protection from fire, and it affords no ranging mark for the enemy.
- ii. *Hedges and bushes.*—These afford cover from view, but not from fire. In open country they may afford a good ranging mark for the enemy's artillery and automatic weapons.
- iii. *Sunken roads, the dry beds of streams and ditches.*—These give excellent cover, often from fire as well as from view. If obvious, however, there is a danger that the enemy will devote particular attention to them, and precautions must be taken against an ambush. If they are straight, the enemy may be able to fire down them in enfilade.
- iv. *Standing crops.*—These afford cover from view, but often restrict the field of fire, and movement through them can generally be noticed.

Ground which the firer cannot see from his position is called "dead ground." The section commander should be able to recognize what ground is likely to be dead to the enemy.

2. **How to use cover.**—To make the best use of cover for movement, the section commander should look ahead.

Crawling is seldom worth while, except for very short distances such as the last few yards to a fire



position, for withdrawing from a fire position, and for concealing movement over a few yards. For longer distances it is tiring and causes delay. Success will often depend on the speed of the advance.

Before crossing a gap, section commanders should study its width and consider what targets their sections are likely to present to the enemy. If the gap is a small one that can be crossed in a few seconds the whole section should double over in one rush, keeping as closed up as possible. If, however, the section is likely to be exposed to the enemy's view for a longer period, then it is best crossed by one or two men at a time at irregular intervals.

**3. Camouflage** means the employment of artificial aids to effect concealment against ground or air observation.

All ranks must first make use of natural cover, and if these do not suffice supplement them by artificial (i.e. camouflage) methods. N.C.Os. should understand the use of those artificial aids which may be available.

4. The art of personal concealment from ground and air observation should be a part of all fieldcraft training.

The following points require special attention:—

- i. The value of irregularity. Avoid a straight line; regular outlines will always show up against the countryside.
- ii. Shiny and light surfaces reflect light. Anything which shines will at once catch the eye of an observer.
- iii. The use and mis-use of local vegetation. Heather or small bushes if used with intelligence may be of great help, but care must be taken not to employ too much. A large bush advancing across a ploughed field will hardly fail to attract attention.

iv. *Concealment of trenches* is considered in Sec. 73. The above section should be read in conjunction with "Notes on Concealment and Camouflage."

### **43. Keeping direction**

1. Closely bound up with skill in the use of ground is the ability to keep direction. To make a detour to

obtain concealment, or to avoid an obstacle, is liable to throw leaders off the correct line of advance. Difficulties in keeping direction also arise in close or undulating country, and in darkness or fog.

For these reasons a section commander must, as soon as he is given his objective, immediately consider how he will keep correct direction.

2. The surest way of keeping direction is by the use of landmarks, compass, or map. Section commanders do not normally carry the two latter, but should be able to use both. When working within the platoon, the section commander must keep in touch with the platoon commander. If moving independently, the section commander can best keep direction by the following means:—

- i. If time permits, by using a rough sketch copied from the platoon commander's map.
- ii. By keeping two distant prominent objects in view.
- iii. By using a series of easily recognizable landmarks, each visible from the previous one.
- iv. By using the sun or stars.
- v. By noting the direction of the wind.
- vi. By memorizing a route from the map. Points such as distance to object, direction, whether up or down hill, likely distant landmarks, cross roads, buildings and streams, etc., will prove a help.

The section commander should move by bounds with frequent pauses to check direction.

#### **44. Movement by night, in mist or in smoke**

1. **Movement by night.**—A section commander when moving by night must remember the following points:—

- i. *The importance of silence.*—Movement is given away more by sound than by sight. Section commanders must ensure that their sections move silently. Sound carries far on still nights. Orders should be given just loud enough to be heard by the recipient. Equip-



ment should be tested beforehand to see that it does not rattle. Men should break step.

- ii. *Reconnaissance*.—Ground over which movement is to be made should, if possible, have been thoroughly reconnoitred beforehand by day. Aids for keeping direction should be noted and plans made for avoiding and getting through obstacles.

If wire is encountered men should be taught to crouch low so that it can be seen in detail against the sky. If no wire cutters are available the easiest way is to go through underneath, moving on the back and holding the strands clear of the body. With wire cutters the lowest strands should be cut and crawling resorted to. To cut wire two men should work together, one holding the wire close to either side of the cutters, while the other cuts. This method muffles the sound and prevents the loose ends flying back. A man working alone should hold the wire near a post, and cut it between his hand and the post.

- iii. *Keeping direction*.—General direction can be kept for short periods by the stars, or by the moon. Roads, tracks, landmarks, which will stand up in silhouette against the sky, and the direction of slopes if noted beforehand will help. The direction of the wind can often be used as a guide.

- iv. *Concealment*.—In darkness it is best to keep to the low ground. Observers on high ground looking into hollows see nothing; observers in hollows have skylines against which movement shows.

When not in low ground, hedges, ditches, banks and walls give a good protective background.

Particular care should be taken in crossing gaps where movement may show against the skyline.

- v. *Control*.—This is difficult at night. Sections

must keep well closed up and bounds must be short. On very dark nights men can keep touch when closed up by holding the bayonet frog of the man in front, or, when crawling, by placing one hand on his heel. After crossing obstacles the leading men should kneel down and wait until the section is closed up before continuing to advance.

2. **Mist and smoke.**—Conditions of mist and smoke are similar to those of darkness, except that they may arise at unexpected times. The ground to the front must always be carefully studied as early as possible so that the section will not be caught unprepared.

#### 45. Observation

1. An observer must be able to see without himself being seen; he must also know how to observe and what to look for.

2. By day a good observation post must generally, but not always, be higher than the surrounding country to give sufficient view. Rising ground, buildings and trees, often provide good observation posts.

3. The principal points to be remembered by an observer, who wishes to remain concealed, are as follows:—

i. Avoid movement, particularly on the skyline. If approaching a crest, he should be careful not to show himself. It is important to avoid skylines at night.

ii. If no cover is available, select the background carefully so that he tones with its colour. By this means it is often possible to be in full view of the enemy and yet remain unseen.

iii. Keep in the shadow.

iv. Select the observation point ahead and then choose a covered approach to reach it.

v. Avoid obvious points where the enemy will expect to find him and will be looking for him.

vi. Look round rather than over cover.

vii. When in position, remain perfectly still; if he must move his head, he should do so slowly



and deliberately. Any sudden movement attracts notice.

viii. The face shows up more clearly than the rest of the body. When possible hold a branch or bunch of grass in front and observe through it.

ix. Avoid smoking. Smoke is clearly visible on a bright day, and at night a lighted cigarette can be seen for nearly 300 yards.

x. Select a point from which it is easy to get away.

xi. When observing from buildings, keep well back from windows and doors; when observing from trees, keep near the trunk to avoid being silhouetted.

xii. Never stand with legs apart or hands on hips.

4. **How to observe.**—The observer must first of all have a clear idea of what he is looking for and of the arc for which he is responsible. A man staring vaguely over the countryside will see little except the most obvious movements. If in close contact with the enemy, likely observation points, fire positions, and covered approaches must receive special attention. If at a distance from the enemy, he should look out for cavalry and armoured cars, and watch roads and tracks for movement.

5. **Observation by night.**—Observation by night, or in fog is a great strain, so observers should work in pairs. The ground to the immediate front should be carefully memorized by day and, if possible, observers should watch while the twilight merges into darkness. This will enable them to pick out the landmarks they have noted by day and which by night may assume totally different shapes. Visibility is best obtained against a skyline.

If any object is stared at for a long period it will appear to move. This is an optical illusion, and observers should not, therefore, stare at any one point for long. When something real does appear it is surprising how large and obvious it seems. During darkness there is always a tendency to under-estimate distances and over-estimate numbers, i.e. to magnify danger—hence the value of a second opinion.

By night the ears should be used as much as the eyes.

With practice, valuable information can be obtained by being able to locate the direction from which sound comes, how far away it is, and its meaning.

Ability to see in the dark increases with practice.

6. As a general rule, a man cannot observe efficiently for an unlimited period of time. Particularly is this so with air sentries.

#### **46. Artillery formations**

On encountering hostile artillery fire, units will deploy into what is known as artillery formations, when approximate distances of 200 yards should be maintained between platoons and 100 yards between sections.

Although section commanders are responsible for keeping sections in their relative positions, section formations must be altered so as to make the fullest use of all available cover and the 100 yards interval should not, therefore, be rigidly maintained.

#### **47. Section formations**

1. Section formations depend chiefly on ground and type of enemy fire likely to be encountered.

2. When within range of enemy small arms fire, sections must deploy unless adequately protected by ground.

It is easier for section commanders to control their sections when closed, but it may be necessary to dispense with a certain amount of control in order to avoid losses. The section formation will also depend on whether it will be necessary to fire.

The formation to be adopted will, therefore, depend on:—

- i. Control.
- ii. Ground.
- iii. Fire production.
- iv. Enemy's fire.

These four points are conflicting and the section commander must strike a balance which will give his section the best advantage.

3. The main formations with their advantages and disadvantages are as follows:—



<i>Formation</i>	<i>Advantage</i>	<i>Disadvantage</i>
File	Close formation facilities control and rapid movement.	Vulnerable. Not good for fire production.
Single file	Useful for certain types of cover such as hedge-rows.	Not good for fire production.
Extended line	Useful for crossing open ground under fire.	Difficult to control.
Arrowhead	Facilitates deployment to either flank.	Control is more difficult than when in file or single file.

The following illustrations show how section formations might be altered to suit different types of country during an advance.

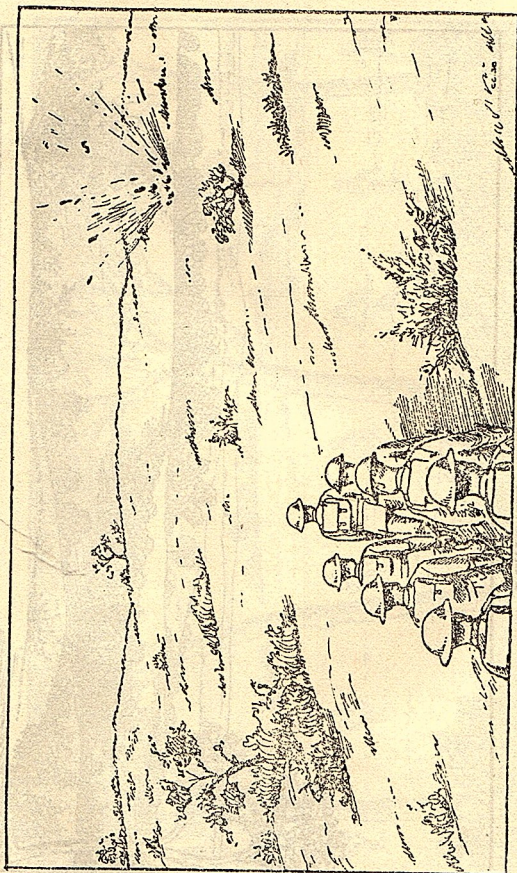
4. During an advance the section commander should change formation to suit the ground and the tactical situation. He should never adhere rigidly to a certain formation because it has been depicted in a training manual, but must be prepared to manœuvre within the section so as to make the best use of all available cover.

5. When sections are deployed, orders will be replaced by signals or brief instructions from the section commander, e.g. "Behind me in file," "on my right and left . . . paces," "across that bridge and line the bank," "arrowhead," etc. Such instructions should be brief and to the point. The better the training and discipline of the section, the shorter can be the orders.

(Plate I)

A section in file.

PLATE I.—FORMATIONS.

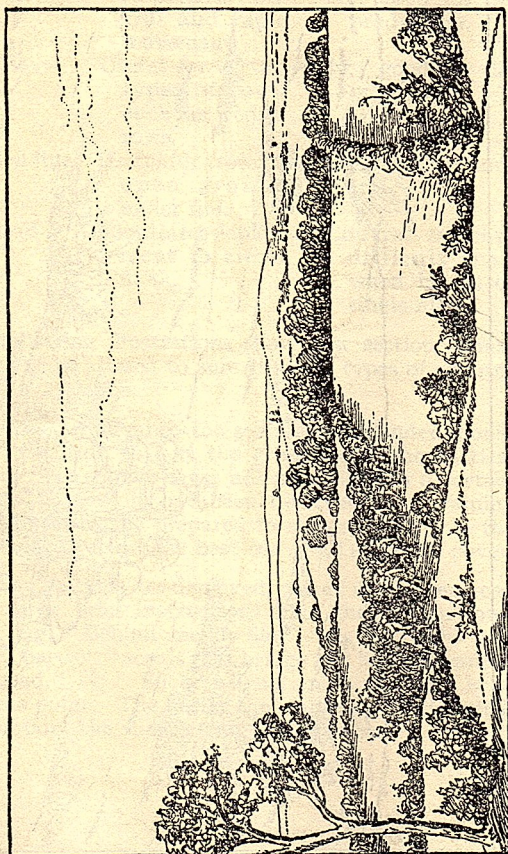




(Plate II)

A section in single file. Note that the section commander is making use of the shadow as well as the hedge.

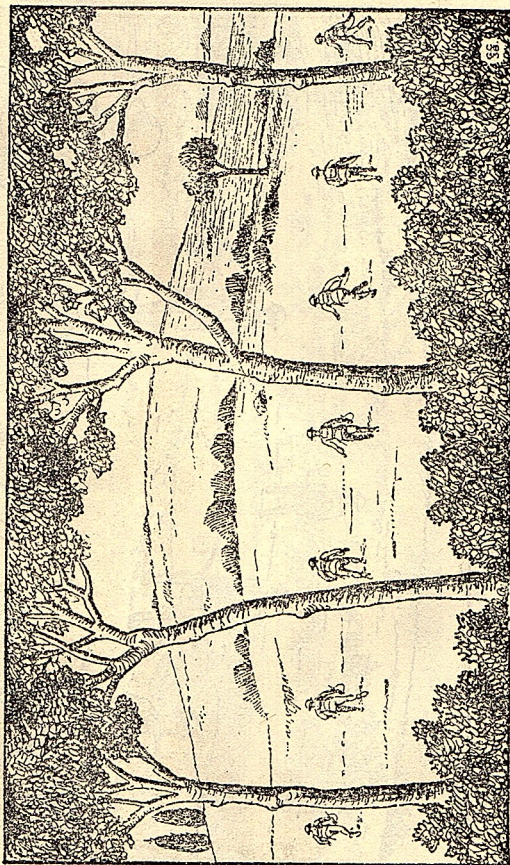
PLATE II.—FORMATIONS.



(Plate III)

A section extended in line.

PLATE III.—FORMATIONS

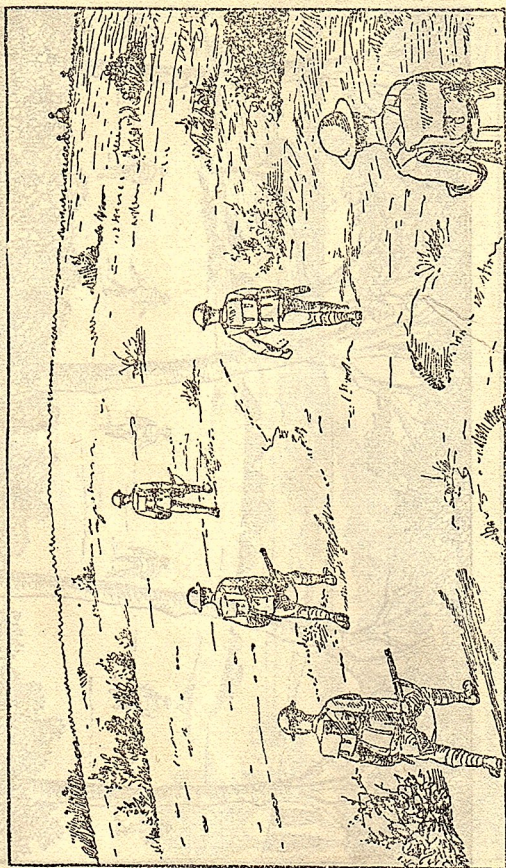




(Plate IV)

A section advancing in arrowhead formation.

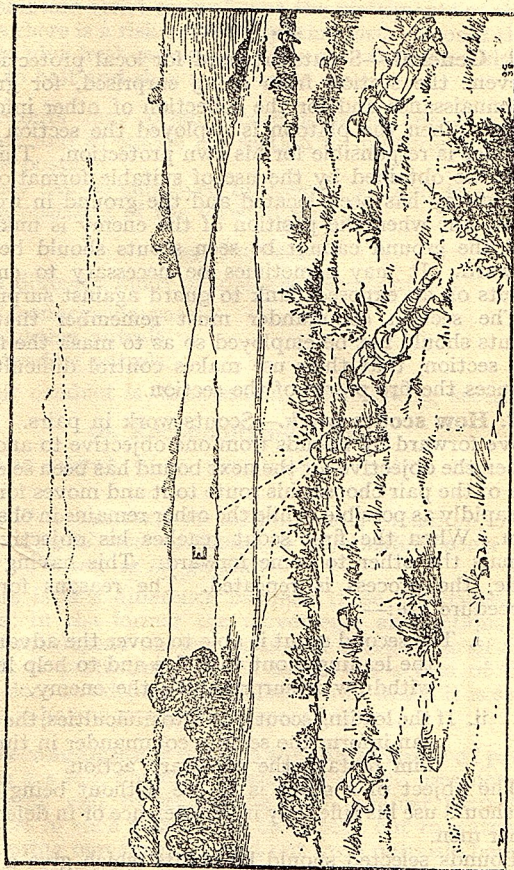
PLATE IV.—FORMATIONS.



## (Plate V)

A section with light automatic in action.

PLATE V.—FORMATIONS.





## CHAPTER VIII

### SCOUTS AND PATROLS

#### 48. Scouts

1. **General.**—Scouts are used for local protection to prevent the section from being surprised, for ground reconnaissance and for the collection of other information. When the platoon is deployed the section commander is responsible for his own protection. This can often be obtained by the use of suitable formations, if the enemy has been located and the ground in front is clear, but when the position of the enemy is unknown and the ground cannot be seen scouts should be sent forward. It may sometimes be necessary to employ scouts on an exposed flank to guard against surprise.

The section commander must remember that the scouts should not be employed so as to mask the fire of the section, that their use makes control difficult and reduces the fire power of the section.

2. **How scouts work.**—Scouts work in pairs. They move forward by bounds from one objective to another. When the objective for the next bound has been selected, one of the pair chooses his route to it and moves forward as rapidly as possible, while the other remains in observation. When the first scout reaches his objective, he signals the other to come forward. This having been done, the process is repeated. The reasons for this procedure are:—

- i. The second scout is able to cover the advance of the leading scout with fire and to help him to withdraw if surprised by the enemy.
- ii. If the leading scout gets into difficulties, the other can inform the section commander in time for him to take the necessary action.

The object of a scout is to see without being seen; he should use his rifle only in self-defence or in defence of other men.

Bounds selected should be points which give a good view ahead and are suitable for signalling back to the

section. The distance ahead that scouts move depends on the nature of the country. A short distance in open country is useless unless they are able to see more than the section commander can. If section commanders do not maintain strict control over the movements of their scouts there is a risk of scouts getting lost. Should they wish to give fresh orders to their scouts they must signal them to halt and then move up to them.

3. Scouts may often locate gaps in the enemy's position and so enable the section to infiltrate between hostile posts.

They can be employed by reserve sections to report on the positions of the forward units.

### 49. Patrols

The different kinds of infantry patrols are:—

Reconnoitring patrols.

Fighting patrols.

Standing patrols.

Their conduct is discussed in the following sections.

### 50. Reconnoitring patrols

1. The object of a reconnoitring patrol may be either:—

- i. *Reconnaissance for the purpose of protection, or*
- ii. *Special reconnaissance for information about the enemy or the ground.*

There is this difference between these two types of patrols: in the former the movements and actions of the patrol depend on the plans and movements of the force it is protecting; in the latter the action of the patrol does not depend on the unit from which it is sent out, as it has no protective responsibilities.

2. **Reconnaissance patrols for the purpose of protection** are sent out to give warning of the presence of the enemy and to secure the force against surprise. Instances of such patrols are those sent out to watch a flank during movement or sent out from outposts before dawn to discover if the enemy has worked up close to



the position during the night. The action of such patrols depends on the movements and plans of the main body.

**3. Special reconnaissance patrols** are employed on tasks such as maintaining touch with the enemy after a successful attack, obtaining particulars of enemy defences or reconnoitring lines of advance. They may also be employed on liaison duties to discover the position of, and maintain touch with, flanking units. They may be sent out by troops in reserve to ascertain the position of forward units; with such patrols it will usually be possible for the patrol leader to carry out his task to some extent in his own time and on ground of his own choosing.

### **51. Conduct of a reconnoitring patrol**

1. To gain information is in itself valueless unless that information can be got back to the commander who ordered the patrol in time for him to act on it.

**2. Orders to the patrol leader.**—In the first instance the success of the patrol will depend on whether the leader understands clearly his task and the object of the patrol. If he is in any doubt, he must ask his commander before he sets out.

Before setting out the patrol leader will be told:—

- i. What is known of the enemy in the vicinity;
- ii. the position of forward detachments of our own troops, and what other patrols, if any, will be out;
- iii. the object of his patrol and what information he is to obtain; this will usually be in the form of straightforward questions, the answers to which the patrol is to bring back; for instance, "Is the enemy still in occupation of KNOBBLY HILL?"
- iv. when the patrol is to set out, and when it is to return;
- v. the route to be followed both going out and returning, and how the patrol is to be recognized by our own troops on its return: it may

be necessary to leave the details of the route to the decision of the patrol leader;

- vi. whether bodies of our own troops in the vicinity have been told that the patrol is going out, its route and line of return.

If all the above information is not given in his orders, it is the duty of the patrol leader to ask for it.

### 3. Preparations before setting out.—

- i. *Reconnaissance.*—The leader should study the ground, and make a plan for carrying out his task. During his reconnaissance he should note particularly likely observation points, covered routes, suitable bounds, landmarks, obstacles and places at which he might be ambushed.
- ii. *Knowledge of orders.*—If possible the whole patrol, and in any case the senior man in the patrol, should be with the leader during the reconnaissance so that the plan can be explained before the patrol sets out. Every man must know what information is required so that if the leader becomes a casualty the patrol will be able to carry on.
- iii. *Equipment.*—The patrol should go out as lightly equipped as possible. Frequently rifles only will be carried with magazines charged and a few extra rounds in the jacket pocket. Nothing bright should be worn or carried.
- iv. *Silence.*—The patrol should move silently, especially at night. Equipment carried should be tested to see that it does not rattle, and men with colds liable to cough or sneeze should be left behind.
- v. *Secrecy.*—No letters, papers or marked maps should be taken, so that, if the patrol or any member of it is captured, the enemy will get the least possible information.

4. **The route.**—This is normally decided by the officer who sends out the patrol. Even so, the patrol



leader must study it carefully in order to make the best use of the available cover, and of places along the route from which observation can be obtained. The route should be altered on the way back; it is always possible that the patrol may have been seen and an attempt made to cut it off on the way home.

No patrol should follow the same route, or exactly the same procedure, twice running. Such action would soon be discovered by the enemy and would lead to disaster.

### **5. The approach to the objective.—**

i. The patrol leader must decide early how he is going to approach his objective. The golden rule is never to do what the enemy expects. For this reason it is generally better to approach the objective from the flank or rear rather than frontally, and, if possible, to avoid obvious places, such as isolated pieces of cover or prominent hills.

ii. The task of the patrol is to get information and return with it. It should strive to do this without fighting. Enemy posts and patrols should therefore be avoided. Information can often be gained more effectively by getting to a suitable position and keeping the objective under close observation than by frequent movement.

iii. Unless the objective and the intervening ground can be seen during the whole course of the patrol, the advance should be by bounds as in the case of movement by scouts. As each bound is reached, the patrol leader will select the next bound and the line of advance to it. Every advance will first be made by scouts working as described in previous sections.

**6. Strength.**—As the tasks of the patrol are to see without being seen and to avoid fighting if possible, it will be as small as possible. Two or three men, if they are competent scouts, may be sufficient, though it will often be necessary to increase this number for self protection, or, if the patrol is to remain out for a long period.

Reconnoitring patrols will, however, seldom exceed a section in strength.

7. The **formation** adopted will depend on:—

- i. Concealment.
- ii. Control.
- iii. Protection.
- iv. Ground.

The patrol will be kept as compact as possible, as the more it is dispersed the more difficult is it to control. At the same time the necessity for guarding against surprise from all sides during daylight will often result in the men of a patrol being widely dispersed. The extent of this dispersion will generally depend on the ground.

The formation adopted must provide for observation not only to the front but also to both flanks and the rear. Each man must know the task for which he is responsible.

One or two men will always follow one "bound" in rear or on a flank, with the dual role of protecting the patrol from a surprise attack and getting away in case the main body of the patrol walks into an ambush. They must try always to keep the patrol in view and yet be able to get away if necessary. Thus their distance from the patrol will depend on ground and visibility.

8. **Withdrawing the patrol.**—The withdrawal will still be by bounds. But before making a fresh bound, the patrol leader will select a suitable fire position in the rear. A portion of the patrol will be sent back to this position by the most rapid route while the remainder are prepared to cover this movement by fire. On reaching the fire position, the first party will be prepared to cover the withdrawal of the rest of the patrol. The positions selected as bounds should give a good field of fire to the front and should, if possible, have a covered line of withdrawal.

On approaching its own lines, the withdrawal of the patrol will be covered by other troops. The line of withdrawal should be selected so as not to mask their fire.

## 52. **Conduct of a reconnoitring patrol by night**

1. On very dark nights it will usually be better not to



move by bounds, but to proceed at a steady pace, in absolute silence, with frequent short halts to make certain of the route and to ensure that the patrol is keeping closed up.

The pace will be slow in this type of movement. A suitable formation is file, with two riflemen and the patrol leader just far enough ahead to be visible to the remainder, and one man a short distance in rear.

2. Silence is essential.

3. If a surprise collision with the enemy takes place, the safest course is to go straight in with the butt or bayonet before the enemy has time to collect his wits.

4. **The route.**—The following simple rules are suitable for patrolling in darkness:—

- i. When moving on roads, keep to the side where the ground is softer.
- ii. Keep to low ground as much as possible.
- iii. Keep in shadow.

Patrol leaders must use common sense and modify their patrol formations to suit the degree of darkness.

### 53. Fighting patrols

1. By reason of their task fighting patrols must be prepared to act offensively. They will usually be commanded by an officer or warrant officer Class III and will consist of two or more sections. They must be strong enough to deal with enemy patrols likely to be encountered, to capture prisoners and to bring back wounded.

2. The task of a fighting patrol may be protective or for some special purpose. Examples of the former type are patrols to delay the enemy during a withdrawal, to counter enemy patrols, to act as covering parties in defence, or to protect troops forming up for a night attack. Examples of the latter type are patrols sent out to secure identifications, to harass the enemy or to cover a demolition party.

#### 54. Standing patrols

Standing patrols are sent out to watch approaches which the enemy is expected to use, for example, such places as fords, bridges and roads junctions, or likely enemy assembly positions which are hidden from the main body. They may also occupy prominent points which an enemy must capture as a preliminary to an attack or may use as a good view point.

The difference between a standing patrol and a defensive post is that the latter must fight in its position to the last, unless otherwise ordered, whilst a standing patrol may change its position or withdraw if forced to do so by the enemy.

#### 55. Conduct of standing patrol

1. Before starting the commander requires to know the following:—

- i. His task.
- ii. His route out and back.
- iii. What he is to do when the enemy advances, i.e. whether to try to delay them or to withdraw.
- iv. How often he is to report, and how his reports are to be sent back.
- v. Any signals which he is to give on seeing the enemy, or to show that he is withdrawing.
- vi. How he is to be recognized on approaching his own line. It is advisable, if time permits, to visit the section posts through which he will ultimately withdraw, so that he will know their exact positions.

2. In approaching its position the patrol moves as described in the preceding sections. As the patrol is operating alone it will be entirely responsible for its own security. All-round protection is therefore of importance.

3. When selecting his position the patrol commander will consider the following points:—

- i. In order to avoid the enemy approaching unseen and the patrol being cut off from the main



body, a position should if possible be selected with no covered approaches on the flanks.

- ii. A covered line of withdrawal should be available.
- iii. From the position, it should be possible to open fire at long ranges to prevent the enemy getting to close quarters.

4. On reaching its position, the patrol should be carefully concealed, precautions should be taken against surprise, and fire positions should be selected in case the patrol has to defend itself.

5. The commander should make his plan for the withdrawal of the patrol when its task has been completed. It is advisable to have an alternative plan in case the first proves impracticable when the time comes.

6. Sentries should be posted in concealed positions and the remainder of the patrol should lie down under cover, but ready for instant action. The sentries should be carefully hidden and should be close enough to their section to be able to give the alarm on the approach of the enemy. The patrol commander will give orders whether sentries will challenge or will open fire on the enemy without his orders.

## CHAPTER IX

### ATTACK

#### 56. General

1. The object of infantry in the attack is to close with the enemy and destroy or drive him out of his position; then, either to defend the ground captured, or to continue to force the enemy back.

2. To achieve this infantry uses the following aids:—

- i. Cover from view and fire afforded by the ground.
- ii. The adoption of formations which will reduce

the chances of being observed and sustaining casualties.

- iii. Covering fire to destroy or blind the enemy and so reduce the accuracy of his fire.

This covering fire is given primarily by the artillery, machine guns, mortars, and carrier platoon. Tanks will frequently be employed to work in conjunction with the attacking infantry and silence the enemy small arms fire.

Whatever outside assistance may be provided, *platoons and sections detailed to capture an objective must continue to advance and must not stop to fire as long as they can get forward.*

### 57. Types of attack

1. Attacks vary greatly, according to the ground, to the volume and accuracy of the defender's fire and the extent of his preparations.

2. Where the enemy is not very strong or has not had time to dig himself in, to put up wire, and to arrange his fire plan carefully, or where the ground is enclosed and offers good covered approaches to the attacker, it will not be so difficult for the attacking infantry to advance.

In this case, the attacking platoons will be able to help themselves forward by using ground to give them cover from view and enable them to surprise the enemy, and by using their own fire to cover their advance; in other words they will not rely altogether on tanks, the covering fire of artillery and machine guns to keep down the defenders' fire, though they will be helped by it.

In attacks of this type, therefore, the attacking platoons must work forward, using their fire when necessary; the fire of supporting weapons will be directed on to targets as they are located by the attacking infantry.

3. On the other hand, when the enemy is strong and well prepared, and the ground is open, all resources, artillery and machine-gun fire, smoke, and probably tanks, will be required to keep down, or to reduce the



accuracy of the enemy's fire. In this case a careful plan will be made, so that covering fire will be really effective. This will make it necessary for the attack to be carried out on a timed programme to which the forward sections must adhere; for once they stop to open fire they will lose the benefit of the support of other arms whose fire will move on according to plan. In the event of the supporting fire proving inadequate, it is then the duty of section commanders to make use of their section weapons to get forward.

It is essential for the section commander to know when the supporting fire is being worked on a time programme and the rate of advance.

4. Attacks may also be carried out by night. In this case the infantry move in comparatively close formations and fight mainly with the bayonet. Section commanders are directly under their platoon commander's orders; for this reason night attacks are not discussed in this chapter.

## **58. Platoon orders**

1. The section commanders will receive their orders from the platoon commander after he has completed his reconnaissance.

Although they should be able to see the ground over which they are going to operate, care must be taken that no one exposes himself unduly, thus attracting attention and probably fire, to say nothing of spoiling any attempt at surprise.

2. The platoon commander's orders should include:—

- i. All available information about the enemy and friendly troops operating on both flanks and in reserve.
- ii. His intention.
- iii. The objective. This will be actually pointed out on the ground.

Landmarks to assist in maintaining direction will also be indicated, and attention drawn to obstacles which might interfere with movement.

- iv. The formation in which the platoon will advance, and the tasks of the three sections.
- v. Start line and forming up position
- vi. The assistance that is being provided by tanks, artillery, machine guns, the carrier platoon, mortars and smoke. Whether the supporting fire is being worked on a time programme or not.
- vii. Any change in the usual equipment of the platoon.
- viii. Where the walking wounded are to go.
- ix. Position and route of platoon headquarters during the attack.
- x. Zero hour.

### **59. The section commander's orders**

1. The section commander will carry out a reconnaissance and then issue his orders, which should include the following:—

- i. Features of the ground pointed out and given names.
- ii. Where the enemy is or is reported to be.
- iii. The position of other troops, if the attack is to pass through them.
- iv. What platoons or sections are attacking on the right and left and what section is in reserve.
- v. The platoon objective, route and formation.
- vi. The task of the section.
- vii. The route of the section.
- viii. What fire support is being given to the platoon by co-operating arms.
- ix. What action is to be taken on the capture of the objective.
- x. If the section has been ordered to carry the anti-tank rifle, two men must be detailed for the task and their position in the section defined.
- xi. Where the walking wounded are to go.



xii. Position and route of platoon headquarters.

xiii. From where and when the section will start the attack.

The above procedure for reconnaissance and issue of orders is the ideal to be aimed at.

2. Where time is short, preparations for battle should go on simultaneously with reconnaissance and issue of orders. If this is the case, the section commander should confine his orders to pointing out:—

- i. Where the enemy is located.
- ii. The objective.
- iii. The route and formation

### 60. Advance to the objective

1. The section will advance making use of such cover as is available; the formation being varied to suit the different types of ground. If faced with an open piece of country which is swept by enemy fire, the section commander should always look for a way round. If none exists he should deploy his section widely and cross the open ground as rapidly as possible.

2. The use of ground and formations has been discussed in Chapter VII but the following simple points should be borne in mind by section commanders:—

- i. The whole platoon must work as a team
- ii. Avoid bunching. When open ground has to be crossed, if narrow, cross rapidly, well extended, if wide, advance steadily in open formation.
- iii. Cross obstacles quickly, as the enemy will probably know the range to them. Do not allow the whole section to go through the same gap.
- iv. Remember that a steady advance in spite of fire may shake the enemy's confidence.
- v. Any fresh information about the enemy or the ground which might affect the platoon commander's plan must be sent back to platoon headquarters as soon as possible.

vi. Flanks are vulnerable; protect your own and try to get round the enemy's.

vii. The light machine gun should never fire rapid unless the target is an exceptionally good one. Full use of single rounds should be employed where such fire will meet the situation; in other words, apply the most economical type of fire to destroy the target.

3. It is always the duty of the attacking infantry to keep on advancing until the objective has been reached.

Even if it is impossible for the whole section to advance, individual men should be ordered to work their way forward under cover of fire from the light machine gun. At the same time control must be maintained. Therefore this system of manœuvring within a section should be limited to short bounds; otherwise sections will become split up and control will be lost.

**4. Co-operation with tanks.**—When attacks are made in co-operation with infantry tanks, close touch must be maintained between the tanks and the attacking infantry.

The object of the tanks will be to break passages through wire or other obstacles, destroy or neutralize the enemy machine guns and so assist the infantry to advance.

The chief danger to tanks will come from the enemy anti-tank weapons, and it is the task of the infantry to locate these and neutralize them by fire.

Tanks cannot remain for long on any objective, so infantry must get forward as rapidly as possible and enable the tanks to withdraw to a rallying point in rear.

#### **61. Action if the section is held up**

Section commanders must seize any opportunity to get their sections forward. Such opportunities may be created by mortar fire, the action of the carrier platoon, by neighbouring sections or by tanks.

If advance is indeed impossible the section commander must:—

i. Employ scouts, if the field of view is restricted,



to find out what is happening on the flanks or in front. They must be prepared to work independently and open fire without orders from the section commander.

- ii. Get his light machine gun into the best possible fire position in the vicinity.
- iii. Arrange positions for his riflemen, so that they can supply the gun with ammunition and protect it in case of a sudden counter-attack from an unexpected direction.
- iv. Reconnoitre for alternative fire positions for the light machine gun and also for the riflemen.
- v. Locate enemy weapons which are holding up his section. Besides engaging them with fire, he should report their position to the platoon commander.
- vi. Exercise careful fire control.

If infantry are held up and tanks are in the vicinity it is the duty of the infantry to get in touch with the tanks so as to obtain their assistance and enable the advance to be resumed.

## 62. Consolidation

1. As soon as a position has been captured the section commander will:—

- i. Get his light machine gun into a position from which it can cover the ground to his front. Give the firer an arc for which he is responsible. Order his riflemen to take up positions covering his flanks. Reconnoitre an alternative position for his light machine gun. Arrange ammunition supply of his light machine gun.
- ii. Report the situation if necessary to platoon headquarters.

2. The period following the capture of an objective is one of slight disorganization when a reaction after effort is likely to set in: during this period troops are very vulnerable to a counter-attack. For this reason immediate steps to consolidate the ground won is essential.

### 63. Exploitation

1. Although the first action on reaching the objective must be the reorganization and rapid defensive measures described above, the attack does not usually end with the capture of the original objective, and sections must be prepared to carry it on.

Whenever possible, fresh units will be detailed for this task, but they may not always be available.

Exploitation can only be carried out after platoons have been completely reorganized, and in any case it will necessitate a fresh plan being made. The action of the troops will then be the same as in any other form of attack.

2. It will frequently occur that the attack succeeds at some points and is held up at others. Where success is gained, sections must be ready for orders to push on, so that the flanks and rear of enemy localities which are still holding out can be attacked.

## CHAPTER X

### DEFENCE

#### 64. General

1. The object of infantry in defence is to defeat the enemy's attack of fire.

2. A defensive position will consist of a series of defended localities, each capable of all round defence arranged in depth so as to afford each other mutual support. The foremost defended localities form the front edge of the defended system and the defences are built up in depth in rear of them.

In front of the line of foremost defended localities a belt of fire of all arms is co-ordinated to break up the enemy's assault. This fire, which is called "defensive fire," can be brought down at any moment by means of pre-arranged signals.

Behind the foremost defended localities fire is organized



in depth to stop any of the enemy who may succeed in penetrating the forward positions.

3. The defended position will be strengthened by digging, wiring and the use of anti-armoured fighting vehicle obstacles and mines.

4. The type of defences that can be constructed depends on the time available for the organization and occupation of the position. Defences will vary between a hasty occupation, when all that can be done is probably the improvement of natural cover, and the construction of a highly organized defensive position consisting of a continuous trench system.

#### **65. What the section commander must know on occupying a section post**

1. The section commanders are given their orders by the platoon commander, after he has completed his reconnaissance and decided on his plan.

2. The following are the various matters which the section commander requires to know when occupying a section post in defence:—

- i. *The enemy.*—Where he is, when attack is expected and from what direction.
- ii. *Own troops.*—The neighbouring localities being occupied, and by whom; whether any troops are out in front to cover the occupation of the position; whether he is responsible for posting any sentries.
- iii. *What help is being given by other arms and by neighbouring platoons.*—In particular the ground which is being covered by the fire of artillery, or infantry supporting weapons.
- iv. *The task of the platoon.*—The position of his own and the other sections, also position of platoon headquarters and anti-tank rifles and 2-inch mortar.
- v. *The position of his own section.*—This will have been selected by the platoon commander who usually takes the section commander to the spot, or marks it for him on the ground.

vi. *The task of his section.*—The section will be given an arc to cover with its fire, but it may in addition be given a special fire task; for instance, to shoot down a particular approach or to fire across the front or flank of a neighbouring platoon. The section commander will be told whether his light machine gun is to fire on a fixed line or not. The fire of the guns which are laid on fixed lines will normally be co-ordinated by the company commander, but each section commander must ensure that the fixed line does not lie within 5 degrees of our own troops. The platoon commander should indicate special points from which, as the attack develops, the enemy may attempt to obtain observation of the position; the riflemen must be prepared to engage such points with fire.

vii. *When fire is to be opened.*—Fire may be opened on some occasions as soon as the enemy comes within range, and on other occasions it may be withheld until the enemy is close, in order to gain surprise. The section commander should know what is intended. He should also be told the signal for defensive fire.

viii. *What digging and wiring (if any) is to be done and the time by which the section is to be dug in and ready for action.*—The platoon commander must lay down what tasks are to be undertaken first. As a rule these include:—

(a) Digging weapon pits, and clearing the field of fire.

(b) Erecting wire.

ix. *The types of section post that are to be constructed.*—In accordance with instructions of the company commander the platoon commander will issue orders as to whether:—

(a) The initial work will be limited to improving natural cover.



(b) Weapon pits only are to be dug, i.e. if the position is not going to be held for a long period.

(c) Weapon pits are to be dug and connected up later into a trench system.

(d) The complete section trench is to be dug immediately.

x. *Patrols*.—When patrols are being sent out in the vicinity, the routes out and back, and the times of their departure and return.

xi. *Tools*.—What tools have been allotted to the section, where they can be drawn and when.

## 66. The section commander's responsibilities

1. The section commander is responsible for the following:—

i. *That the section weapons are placed so that they can actually fire on the ground allotted to them.*—

The platoon commander, in selecting the section position, will have taken this into consideration but the section commander must select the site for each weapon; *this must be done with the eye close to the ground.*

ii. *That the section is properly dug in.*—See para. 2, below.

iii. *That the section is concealed.*—See para. 2, below.

iv. *That a proper routine is observed when a post is established.*—See Sec. 74.

2. Considerations affecting the different types of defences with which the section commander may have to deal are discussed in the following sections, i.e.:—

Improvement of natural cover .. .. Sec. 67.

Weapon pits .. .. Sec. 68.

Crawl trench .. .. Sec. 69.

## 67. Improvement of natural cover

1. When making use of natural cover, prominent landmarks must be avoided. Advantage should always be taken of natural banks, ditches and hedges, partic-

ularly those which give cover from the front to a section with an oblique or enfilade task.

Some of the types of cover which may be available are:—

- i. Sunken roads and railway cuttings. May become shell traps. Can be improved by digging into the bank nearest the enemy to make fire positions and shelters.
- ii. Walls and rocks are good, but apt to splinter and usually easy to range on. Banks and walls do not give protection from shells bursting behind them, and many are not bullet-proof.
- iii. Shell holes form a ready made weapon pit, but when a section is occupying several shell holes control by the section commander becomes difficult unless they are connected up. Overcrowding in one shell hole must be avoided.
- iv. Buildings are sometimes useful, but the roofs may collapse under shell fire. If they are to be held for any time, expert assistance is necessary to make them proof against heavy fire.

2. No rules can be laid down for improving natural cover, since no two cases will be quite the same. Cover should be bullet-proof: the following are the thicknesses of various materials required for this purpose:—

Shingle	..	..	..	..	9 inches.
Brick walls	..	..	..	..	21 „
Sand (in bags)	..	..	..	..	27 „
Sand (loose)	..	..	..	..	45 „
Earth	..	..	..	..	60 „
Clay	..	..	..	..	90 „
Peat	..	..	..	..	120 „

### 68. Weapon pits

1. There can be no standard plan for section posts. Their position must be chosen to suit the ground and the fire task of the section.

2. Weapon pits should as a rule be close enough together to enable the section commander to give



verbal fire orders. Five yards clear space between pits is a rough guide, but spacing will depend on the ground and other factors. Before any digging is started the complete position should be traced out on the ground if circumstances permit. This is to ensure that sufficient room has been left for traverses and that the pits have been so sited so as to avoid unnecessary digging if they are to be joined up later into a complete trench system. As a rule, to minimize the effect of shells or enfilade fire, a bend in the trench or traverse is required between every ten yards of straight trench.

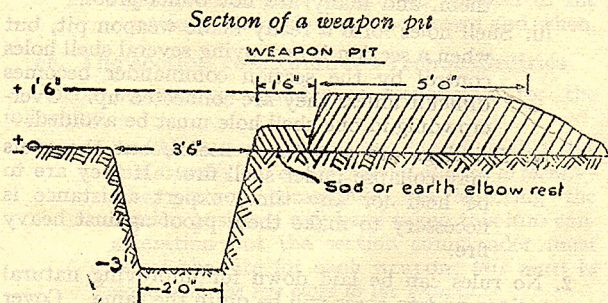


FIG. 5.

3. There should usually be at least two men in a weapon pit for companionship. Three weapon pits should suffice for a section; the section commander will probably be in the same pit as the light machine gun.

4. Each weapon pit must be sited square to the most important fire task allotted to its occupants. At the same time the necessity for all round defence must not be overlooked. *It is essential* that section commanders get down and test with the eye, at the height of the proposed parapet, whether the necessary view can be obtained.

5. The average dimensions of the pits are 3 ft. 6 ins. wide at the top and 3 ft. deep. See Fig. 5.

The parapet consists of the earth thrown up in front

from the trench. The height of the parapet will depend on the amount of command necessary. The lower the parapet the less conspicuous the weapon pit will be.

A weapon pit (to accommodate 2 men) can be dug in average ground by one man in four hours.

If the parapet is made less than 1 ft. 6 ins. the weapon pit should be deepened correspondingly to provide a total firing height of 4 ft. 6 ins. In such cases the surplus earth should be used to protect the most vulnerable flank or the rear.

### 69. Crawl trench

1. Crawl trench consists of a semi-circular cut in the ground, 3 ft. 6 ins. wide at the top and 1 ft. 6 ins. deep

*Section of a crawl trench*

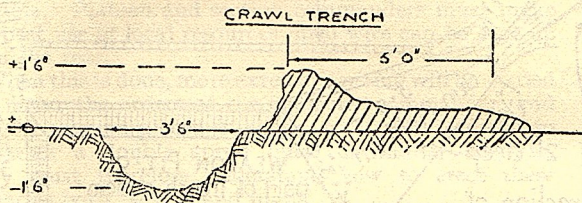


FIG. 6.

in the middle; 5 yards run can be dug in average ground by one man in four hours.

NOTE.—Some of the excavated earth (spoil) is thrown high to give cover from view (though not from bullets) for men crawling along the trench; and some is thrown far enough forward to give the same appearance as the spoil from a 3-ft. deep trench.

2. When these tasks have been completed the defensive position will consist of weapon pits connected up by crawl trench. Thus the occupants of the position will have protection from fire in the weapon pits and protection from view when moving from one pit to another. Crawl trench is merely an intermediate stage in the development of defences. It must be deepened to 3 ft. as soon as possible.



## 70. Emplacement for a light machine gun tripod mounting

The dimensions of an emplacement for a tripod mounting are shown in the following diagram.

*Emplacement for a light machine gun*

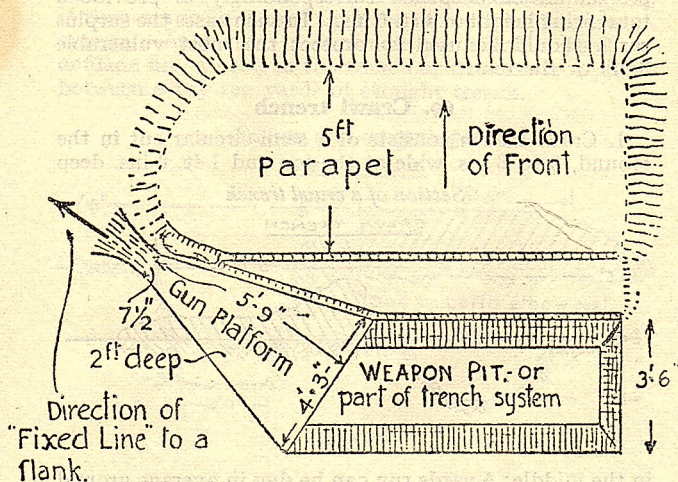


FIG. 7.

## 71. General hints for section commanders when digging in

1. Each man's equipment and arms should be laid on the right hand side of his task as he faces away from the enemy. They must be easy to "get at" and arranged methodically so that each man knows exactly where his equipment lies. This is especially important at night when equipment can easily be lost.

2. If the section is finding sentries, these should be relieved from digging for short spells of 30 minutes' duty.

3. If a Verey light or parachute light goes up while the section is digging everyone must keep still.

4. Digging will frequently take place at night. Although darkness screens the work from hostile air reconnaissance it makes control of the working parties more difficult. The sites for the weapon pits or trenches will have been selected and marked by day. Section commanders must lead each man personally to his task and show him exactly what he is required to do. As the work progresses, constant supervision will be required to see that men are not deviating from the original lay-out of their task. Section commanders must be prepared to dig themselves though they will not be allotted a normal task.

## 72. Wiring

It is important that some form of wire obstacle should be erected in front of the defensive position as soon as possible. Platoon and section commanders must make the best use of local resources until wire can be sent up from the rear.

When this is done, more extensive wiring will be carried out under the orders of the company commander, and N.C.Os. may be placed in charge of a party ordered to construct a double apron fence or similar obstacle. They must therefore understand how to erect these obstacles both by day and night.

Drill for the erection of a double apron fence will be found in the Appendix.

## 73. Concealment

(See "*Notes on Concealment and Camouflage.*")

Concealment for observers and scouts has been dealt with in Chapter VII. Many of the points contained in that section apply equally to the concealment of weapon pits, but in addition the following require attention:—

- i. In grassland, the top turf from the site of the weapon pit *and as far forward as the earth will be thrown* must be carefully removed, and later spread over the parapet of the completed weapon pit. In ploughland the top soil should be kept for this purpose.
- ii. The parapet must be bullet proof (*see Sec. 67, 2*), as low as possible and irregular.



iii. Local vegetation may be used to make the weapon pit tone with the neighbouring countryside. This must be done carefully; too much vegetation is worse than too little. If the trenches have been constructed during the night, they must be concealed before daylight. It is important at first light to look at the trench from a few yards in front, as the arrangement of camouflage is difficult at night. The few available minutes before visibility becomes good can then be employed in adjusting the local vegetation.

iv. Carefully concealed works will often be betrayed on air photographs by the tracks round them. So trampling round the work should be avoided as much as possible; efforts should be made to rectify the effects of tramping; for example by raking the grass up or covering the marks with bracken, heather, etc.

#### 74. Routine in the position

1. The object of organizing the routine in a section post is to make certain that:—

- i. the post is never surprised;
- ii. proper discipline is maintained, so that the section is always ready for action, can defend its post efficiently, and the position of the post is not given away to hostile observers by exposure or lax track discipline.

iii. The equipment, weapons and ammunition are in good condition.

#### 2. Routine by day.—

i. When ordered, the section will provide a sentry or sentries to watch for:—

- (a) signs of the enemy,
- (b) enemy aircraft,
- (c) signs or signals from platoon headquarters,
- (d) gas.

*The section commander must personally organize reliefs and each sentry must be posted by a N.C.O.*

- ii. Rifles and light machine guns should be concealed by day, but should be ready for instant action.
- iii. A time must be fixed for the inspection of rifles, light machine guns, oil bottles, ammunition, anti-gas equipment, emergency rations and first field dressings both morning and evening.
- iv. Careful observation must be maintained to ensure that no enemy movement, or new work, is unobserved. Everything noted must be reported to platoon headquarters.
- v. No man should leave the post without the section commander's permission.
- vi. The trench must be kept clean and tidy.

### 3. Routine by night or in foggy weather.—

- i. Sentries should be posted in pairs and relieved alternately so as to ensure continuity of observation.
- ii. Men in forward companies should sleep fully clothed and equipped, ready for instant action.
- iii. No lighting of matches or smoking is permissible by night.
- v. Rifles should be in position on the parapet; bayonets must be fixed. The light machine gun will be placed on its tripod for fire on the fixed line if one has been allotted.
- v. All men must be warned of the importance of the continuance of track discipline by night.
- vi. The sentries must be warned about any patrols which are going out or returning near the post.
- vii. The section must "stand to" an hour before daylight and before dusk and remain standing to until ordered to stand down.

## 75. Sentries

1. The security of a post depends on the care with which sentries are posted, and on their alertness and efficiency.

2. Sentries must be posted so that they can warn the section silently, by day or night; they must remain in the post and avoid any unnecessary movement. During



darkness, when double sentries are employed, they should be in touch with each other and able to communicate without movement. The position of reliefs should be so arranged that they can be wakened for their tour of duty without disturbing the rest of the section.

3. Sentries must understand the following procedure for dealing with persons approaching the post:—

- i. If anyone approaches, the sentry will immediately warn the post.
- ii. If the person or party approaches close to the post, the whole section should be ready to fire and the sentry will call out "Halt" just loud enough to be heard. If the order to halt is obeyed, the section commander will order the person or commander of the party to advance and give an account of himself; the remainder of the section meanwhile covering the party with their weapons. If the order to halt is disobeyed, fire will be opened without hesitation. There is always a tendency at night to challenge and shoot too early. Sentries will not "challenge" until they are certain that those approaching are so close that the section cannot possibly miss them with fire. On very black nights it is usually better to rely on the bayonet, in which case the sentry will not challenge until the last possible moment.

4. All sentries must know:—

- i. the direction of the enemy;
- ii. the extent of the ground which they have to watch;
- iii. the position of the section posts on their right and left;
- iv. the names of any landmarks on their front;
- v. the procedure to be followed if they see anyone approaching the post;
- vi. particulars of any friendly patrols due to return through their post;
- vii. the signal for defensive fire;
- viii. the countersign.

## CHAPTER XI

## PROTECTION

## 76. General

1. Commanders are at all times responsible for the protection of their units; no body of troops can be regarded as secure unless protection is furnished in all directions from which attack is possible, whether from the front, the flanks, the rear or the air. Under modern conditions, even when at a considerable distance from the enemy and when other troops are in front or to the flanks, units are liable to attack, and should therefore always be ready to fight and protect themselves at short notice.

2. The forms of protection considered in the succeeding sections are:—

- i. Anti-aircraft.
- ii. Anti-gas.
- iii. Anti-A.F.V. road blocks.
- iv. Protection when withdrawing—Rear guards.

## 77. Anti-aircraft defence

1. Speed is the essence of all attacks from the air. A few seconds only will elapse between the first appearance of the aircraft and the end of the attack.

The efficiency of the defence will therefore depend:—

- i. On the speed at which warning of the attack can be conveyed to subordinate commanders.
- ii. On the quickness with which the warning can be followed by executive orders for movement or fire.
- iii. On the skill, steadiness and fire discipline training of the troops.

2. **Means of protection.**—Infantry protects itself against enemy aircraft by:—

- i. Concealment.
- ii. The adoption of suitable formations (dispersion).
- iii. Small arms fire.



**3. Concealment and formations.**—On the line of march concealment is almost impossible but when at rest or deployed the following points should be considered.

- i. The adoption of irregular formations in such small groups that the target, if observed from the air, does not appear worth attacking.
- ii. Troops should keep in the shade and not look up.
- iii. If in the open, they should lie down and remain still.
- iv. Engines of mechanical vehicles will be stopped so as to prevent smoke from the exhaust.
- v. Efforts should be made to conceal the smoke of cooking.

4. Air observers find the position of bivouacs by the study of air photographs, which clearly show new tracks and turned soil. Their object may be defeated by:—

- i. Good track discipline.—This is of the utmost importance. Sentries must be posted to ensure that troops only use covered approaches (under hedges, etc.) and avoid making obvious tracks in the open.
- ii. All earth turned for latrines, etc., should be located under cover.

5. **Warning.**—Air sentries should always be posted to give warning of the approach of hostile aircraft. The signal is a succession of long blasts on the whistle, but since this may often be inaudible, sentries should also make a visual signal by holding both arms above the head and waving their hands. Sentries must be continually watching the sky, especially in the direction of the sun or towards low hills, woods, etc. They must also listen for the approach of aircraft. Their duties are exhausting and entail great strain on the eyes. They should therefore be relieved frequently.

#### **6. Small arms fire.—**

- i. *At rest or when deployed.*—Orders will be issued by battalion commanders as to whether

hostile aeroplanes are to be engaged by small arms fire or not. In certain circumstances when troops are well concealed it may be inadvisable to open fire so as to avoid disclosing their presence. Section commanders must be quite clear on this point and instruct their sections accordingly.

ii. *When halted*, the fire of the light machine gun is the most economical form of protection.

iii. *On the move*.—The fire of all available rifles must be used to protect the column. Light machine guns should be brought into action if time permits, but this will rarely be possible except for the four light machine guns carried in the anti-aircraft platoon.

Before starting out, all rifle magazines will be charged with 10 rounds and sights set at 500 yards.

On receipt of the order "Aircraft action" the following action will be taken:—

- (a) Files will open out, two files remaining on one side of the road, one file doubling across to the other. The crown of the road will be left clear.
- (b) The platoon will be the fire unit. Fire orders will be issued both verbally and visually by platoon commanders.
- (c) Section commanders will not fire, but will assist in controlling the fire of their sections. They will ensure that as a safety precaution the left elbow of the rifleman never drops below the shoulder when firing. This is particularly important when two sections are on one side of the road.
- (d) The aeroplane will be engaged with continuous rapid fire.
- (e) Fire unit commanders will ensure that as much fire as possible is concentrated on the aeroplane when it is climbing



away after the attack, as it will then present the most favourable target.

- (f) When the attack is finished, magazines will be re-charged with ten rounds and the advance continued with as little delay as possible.

### 78. Anti-gas

1. **General.**—Gas may be used by the enemy in many different ways. It may be sent over in shells, mortar-bombs, projector bombs, air-bombs or sprayed from aircraft. It may also be emitted from gas cylinders and carried over by the wind in the form of a cloud. Ground may also be contaminated by enemy in withdrawal by means of ground contamination bombs or gas mines.

Gas may be used by the enemy in order to:—

- i. Produce casualties.
- ii. Harass our troops by forcing them to wear their protective equipment for long periods.
- iii. Contaminate ground, thus causing delay and casualties.

2. It is important that protective arrangements should be taken immediately. To do this, it is essential that gas should be recognized at once, and all personnel in the gassed area immediately warned.

3. **Characteristics of the different gases.**—Generally speaking gases can be divided into two different types—persistent or non-persistent.—

- i. *Non-persistent* gas is like smoke from a chimney which is rapidly dispersed by the wind. It will therefore only be dangerous in any one spot for a short period.

- ii. *Persistent* gas is a liquid giving off a vapour until the liquid dries up, when it becomes harmless. This vapour may continue for hours, days or even weeks.

4. **Non-persistent types** are divided into two different groups.—

## i. Choking group.—

Type (1)	How to recognize (2)	Effect (3)	Protection (4)
Phosgene ..	Smells of musty hay.	Coughing and choking which may become intense.	Respirator gives complete pro- tection.
Chlorine ...	A greenish coloured gas, smells like chloride of lime.	Ditto, ditto, but in addi- tion produces severe vomit- ing.	Respirator gives complete pro- tection.

## ii. Nose group.—

Type (1)	How to recog- nize (2)	Effect (3)	Protection (4)
Poison smoke	Visible at point of emission but soon becomes invisible. Can only be recognized by effect it produces after ap- proximately 3-5 mins.	Burning pain in the nose followed by sneezing. Casualties re- cover in a few hours.	Respirator gives complete pro- tection but when the respirator is put on after exposure to this gas the symptoms tend tempora- rily to get worse instead of better.

5. **Persistent types** are divided into two different groups.—

i. *Tear group.*—

Type (1)	How to recog- nize (2)	Effect (3)	Protection (4)
Some of these gases may be non-persistent but usually they are per- sistent.	Can be re- cognized at once by the immediate effect on the eyes.	Copious flow of tears and spasm of eye- lids. These symptoms pass after a short period.	Respirator gives complete pro- tection.



## ii. *Blister group.*—

### (a) **Mustard.**

*General.*—This is the most likely type of gas to be used. It remains dangerous in some cases for long periods. It will penetrate the skin in five minutes and ordinary clothing in about 10 minutes. Both the liquid and vapour given off by the liquid are dangerous.

*How to recognize.*—The liquid may be light straw or dark brown in colour but on grassland, etc., it will often be invisible. It can be recognized by the smell of garlic or onions given off by the vapour.

#### *The effect.*—

N.B.—The following times can only be taken as a simple guide.

#### *Liquid form.*

*Eyes.*—Immediate irritation, closure of the eye in about one hour. Permanent blindness.

*Skin.*—Nothing will be felt at first. Redness appears in approximately 8 to 12 hours; then intense irritation followed by blisters in from 12 to 24 hours. Swallowing contaminated food or water causes severe injuries to the stomach.

#### *Vapour.*

To be affected by vapour an individual must remain in a strong concentration for a period of from  $\frac{1}{2}$  hour to 1 hour or even longer.

*Eyes.*—No immediate effect. After a few hours, irritation followed by temporary blindness within about 24 hours.

*Throat.*—Loss of voice and cough. Severe cases may prove fatal.

*Skin.*—No immediate effect. Irritation after a few hours, then blisters may develop.

#### *Protection.*

Protection is provided by anti-gas clothing—see para. 4 below.

(b) **Lewisite.**—Smells of geraniums. Has the same general characteristics as mustard gas.

**6. Personal anti-gas clothing.**—The following are issued for anti-gas protection:—

- i. *Respirator*.—Affords 100 per cent. protection to the eyes, nose, throat and lungs against all known war gases, provided it is in working order and has been fitted correctly.  
Breath must be held until the respirator has been adjusted.
- ii. *Eye shields*.—Expendable. Six will be issued to each man and will be carried in the pocket of the respirator haversack. They should always be worn when there is a danger of being sprayed with gas from the air. They provide complete protection to the eyes from liquid blister gas.
- iii. *Capes*.—Will be issued on a basis of three for each man. One will be carried on the man or in the platoon truck, one in unit transport and a third in a rear echelon. Each cape will provide protection for approximately  $1\frac{1}{2}$  hours against liquid blister gases. They do not provide protection to the face, hands, ankles and feet.
- iv. *Ointment*.—Two tins each holding eight small lead tubes will be carried by each man; one in the respirator haversack and the other in the pocket of the cape.

If applied within five minutes after contamination the ointment gives complete protection from mustard gases. If applied between 5 and 15 minutes the effect of the gas will be considerably reduced.

**7. Gas warning.**—A good system of alarm signals to warn troops that gas is being used by the enemy is essential. All sentries are automatically gas sentries; they may detect the presence of gas by:—

- i. Smell.
- ii. Gas spray detectors—which develop red spots when sprayed with blister gas. They are used to indicate the fall of gas spray. In addition to sentries, mechanical transport will



be provided with these detectors. An individual detector will be carried by all personnel.

Sentries will give warning of the presence of gas on their own initiative whenever gas is detected by sounding the local alarm.

**8. Protection.**—On the gas signal being sounded all personnel will at once adjust their respirators.

**9. Action on encountering a gassed area.**—When an area contaminated with blister gas is encountered by the leading troops the main principles are:—

- i. To make every effort to find a way round the obstacle and then continue to advance, unless actually attacking in which case the contaminated area must be ignored and casualties accepted.
- ii. Warn those in rear of the position of the contaminated area.

**10. Duties of leading section commander.**—In accordance with these principles the leading section commander will:—

- i. Order the section to put on respirators.
- ii. Send back a verbal report to the platoon commander.
- iii. Find a way round and continue to advance.

## 79. Road blocks

**1. General.**—The radius of action of A.F.Vs. raises special problems of protection which particularly affect a force on the move.

Even when no immediate threat against a flank exists, encounters with small numbers of hostile A.F.Vs. or troops in mechanical vehicles are possible. In such a situation the most economical form of protection may be to establish road blocks covering approaches on the threatened flank or flanks.

**2. Siting of road blocks.**—Road blocks should be built at points where it is difficult for crews of approaching A.F.Vs.:—

- i. To see the obstacle until they are close to it.
- ii. To turn the vehicle round.

iii. To drive off the road and move across country.

Hence defiles where the road passes between woods, deep ditches, thick hedges or buildings are suitable. Surprise should be obtained by choosing a site round a corner, where the block will be invisible until the hostile A.F.Vs. are almost on top of it.

**3. Construction of blocks.**—Road blocks may be constructed of:—

i. *Carts.*—Farm carts filled with stone or other heavy material—farm implements wired together.

ii. *Trees.*—Big trees felled across the road. To fell a tree in a given direction, cut into it as far as the centre on the side on which it is required to fall; then strain it in that direction by means of a rope, and finish off by a cut on the opposite side, about 4 inches higher up.

To prevent A.F.Vs. from either surmounting the obstacle or brushing it aside, trees should be cut five feet from the ground, and should be left partly attached to the stump.

iii. *Anti-tank mines.*

iv. *Concertina wire* or truck tow ropes bound together by wire.

**4. Defence of the block.**—Like all obstacles, road blocks must be covered with fire. One section with, if possible, an anti-tank rifle, is sufficient garrison for a road block.

A.F.Vs. usually work in pairs and may be supported by infantry. The anti-tank rifle or light machine gun must be sited away from the block but covering the road on the enemy's side; the remaining riflemen should be scattered in positions from which they can protect the anti-tank rifle, and engage the A.F.Vs. with fire from different angles. They must be prepared for an out-flanking movement by the enemy.

Whenever possible a road block should be covered by the fire of the anti-tank rifle. This is not essential, provided adequate small arms fire is available.

**5. Alternative positions.**—Although the hostile A.F.Vs. may be expected from a certain direction, it is



always possible that they may appear where least expected. Posts must be sited for all-round defence.

Where no natural cover from fire exists, garrisons of road blocks should dig weapon pits for their own protection. Clearance of field of fire will often be necessary.

Arrangements for covering the road block by fire should be such that fire can be opened in the event of hostile A.F.Vs. using smoke to conceal their movements.

**6. Gaps.**—It may often be necessary to organize road blocks so that friendly vehicles can pass. These should be made of two overlapping portions. Concertina wire, if available, can be used to fill the gap.

### **80. Protection when withdrawing—Rear guards**

**1. General.**—A force retiring covers itself against enemy pursuit by a rear guard, whose duty is to secure for the main body an unmolested withdrawal. Platoons forming part of a rear guard will often be protected by cavalry or the carrier platoon. A rear guard usually withdraws from one position to another or through a position held by other troops.

**2. Rear guard position.**—Rear guard and defensive positions are similar, and the section commander will have the same tasks in both.

The main differences are that, in a rear guard position depth is sacrificed and positions are selected so as to obtain the maximum field of fire from the outset and a covered line of withdrawal. A large proportion of light machine guns will therefore be given arcs of fire straight to the front.

**3. Withdrawal.**—Withdrawal from a rear guard position will usually be carried out at night. By day it is a very difficult operation.

Before withdrawal, the section commander in an advanced platoon will require to know:—

- i. Time up to which the forward defended localities are to be denied to the enemy.
- ii. Who is holding any position which may have been organized in rear, where it is, and what time his section is to pass through this position.

- iii. Route back to platoon and company rendezvous.  
This route must be chosen so as not to mask the fire of any troops holding a position in rear.
- iv. Who will give order to begin withdrawal (if he has not got a watch).
- v. What covering fire is available.
- vi. Where the platoon truck will be located and what spare equipment can be loaded on the trucks prior to the actual hour of leaving the position.
- vii. Locations of platoon and company headquarters.

On receipt of this information the section commander will prepare his plan for the withdrawal of his section. He will reconnoitre his route back and will decide whether "thinning out" will be by individuals or whether the whole section can get away together. In the former case he must select a section rendezvous, in a covered position, where the whole section can assemble. From this point the section will withdraw to the platoon rendezvous as a formed body making use of all available cover.

## CHAPTER XII

### SECURITY OF INFORMATION

#### 81. General

It should be a matter of discipline that other ranks must never discuss subjects relative to naval, military or air work, operations or movements of any kind in the presence or hearing of any stranger whatever, whether in uniform or not, whether on leave or in the theatre of war.

No letters, papers, marked maps, copies of orders, note books, diaries, etc., will be taken by men on occasions when they are liable to capture. All waste papers left behind in billets or camps must be destroyed.



## 82. Conduct of British prisoners of war

1. One of the most fruitful sources of intelligence in the field is the information which may be obtained from a prisoner of war. One soldier, uninstructed as regards reticence, may, if he is captured, betray an important projected surprise manoeuvre by his answers to the seemingly innocent questions of an adept interrogator.

2. Under international law, every prisoner of war is bound to give, if questioned on the subject, his rank, true name and number; if he infringes this rule he is liable to have the advantages given to prisoners of his class curtailed.

3. The duty of a soldier when captured is therefore to refuse any information to the enemy, except his rank, true name and number. On no account is he to state the unit or formation to which he belongs or which he was accompanying when captured, or to answer any questions about British uniform or badges.

4. It must be clearly understood that although the right of interrogation is not limited to name, rank and number, yet a prisoner of war is not bound to answer any other question, and cannot be punished or submitted to any disadvantages for refusing to do so. A prisoner of war cannot be punished for giving false information about his own army.

5. The safest procedure is to give the information regarding name and rank or number to which the interrogator is entitled and to decline to answer further questions. Attempts to give misleading information may do more harm than good, and may lead to the extraction of true information eventually.

6. All should be instructed that their obligations as regards reticence do not cease with their actual interrogation. The enemy will probably make arrangements for placing agents as pseudo prisoners for listening to prisoners' conversations when they think that they cannot be overheard. They must therefore be very careful when they speak and to whom they speak; they should hold conversation with no one (British or otherwise) whom they cannot personally identify as a comrade.

7. They should not forget that, even when speaking to a comrade, their conversation may be overheard by some form of concealed listening apparatus.

8. At the termination of hostilities a prisoner who has committed treachery or given information to the enemy while a prisoner is liable to severe disciplinary action.

### **83. Regulations for the contents of correspondence**

Allusions to any of the following matters are forbidden at all times in private correspondence during a war, whether relating to naval, military, or air forces or operations:—

- i. Strength, efficiency, morale or organization of our forces, including any comment on the absence or presence in the theatre of war of a unit or formation, or disclosure regarding the formation to which any unit is attached or belongs.
- ii. Location or movement of any naval, military or air force units or detachments; arrival or lack of reinforcements.
- iii. Armament or equipment of any kind.
- iv. Distinguishing signs used for the identification of formations, units, and their transport.
- v. Plans and forecasts or orders for future operations, whether known or merely rumoured or surmised.
- vi. Communications—such as the use, condition, or probable extensions of roads, railways, or other transportation facilities, bridging operations, etc.
- vii. State of the maintenance services, including any reference to reserves.
- viii. Position or description of billets, bivouacs or camps.
- ix. Casualties before official publication.
- x. Effect of any action by the enemy. Any remark which might tend, if published, to encourage the enemy, to cause despondency in our own forces or people, or to incite a feeling of hostility among the people in the theatre of war or in neutral countries.



- xi. Criticisms and statements calculated to bring into disrepute our forces or those of our allies.

2. Private correspondence in the field will be in plain language. Codes, ciphers and shorthand will not be permitted. Picture postcards will be suppressed by franking officers if they may in any way disclose the writer's present or past location, or the route by which movements of the writer's unit have taken place. It is not permitted either in the address or text of correspondence to connect the name of a place with that of a unit, or the name of a unit with the designation of an army post office.

3. It is forbidden to send, or to attempt to send, to unauthorized persons:—

i. Official documents, including intelligence summaries, orders, reports, maps, etc., or to disclose their contents except in the course of duty.

ii. Any document captured from the enemy, or found in places occupied by the enemy, and any document containing information about the enemy.

iii. Any official document belonging to the civil authorities in allied or enemy territory.

4. It is forbidden to despatch to neutral or enemy countries:—

Photographs or pictorial matter of any kind, from whatever source they may have been obtained.

5. It is forbidden to communicate to the Press except through the duly authorized channel.

6. It is forbidden to send through the post photographs or films except those taken under proper authority.

7. It is forbidden to insert advertisements or letters in any publication inviting correspondence with strangers, or to enter into correspondence with any stranger in response to such advertisements or invitations.

The greatest caution and reserve are necessary in acknowledging presents from unknown donors, or in replying to trade circulars from unknown merchants and

dealers. Replies to circulars from neutral countries are forbidden.

8. It is forbidden to make use of the civil postal service in a theatre of operations, or to transmit correspondence by the hand of an officer, soldier, or civilian proceeding outside the theatre of operations, except by a recognized military messenger service.

#### **84. Field Service postcards**

1. The field service postcard will not as a rule be delayed in transit by the censor staff, provided that:—

i. In the case of Army Form A 2042, nothing has been added except the address, name of sender, and date of despatch, and of the last communication received, and lines erasing sentences not required.

ii. In the case of Army Form A 2042A, B, or C, they have been used only for the purpose for which they are issued.

The copyright of the field service postcard is vested in the Crown; the use of any imitation of it is an infringement of the copyright.

#### **85. The green envelope**

1. The green envelope (Army Form A 3078) is issued to the troops for the transmission of letters relating to private and family matters only. The green envelope will be posted by the sender's unit without franking, but its contents are liable to censorship at the base. The scale of issue of the green envelopes will be determined by the C.-in-C. Their provision will be regarded as a privilege liable to be withdrawn at any time. The existence of these envelopes will not be used as a means to absolve officers from the duties of regimental censorship, or to induce or compel men to send all their letters by them. Any misuse of the envelope or infraction of the regulations for its use will be regarded as a serious offence.

The green envelope will be used subject to the following regulations:—

i. The certificate regarding its contents, printed



on the face of the envelope, must be signed by the sender.

- ii. Green envelopes cannot be registered and should not be used for the transmission of money or valuables.
- iii. Writers may enclose up to three of their own letters in ordinary covers in one green envelope. When used for more than one letter the green envelope will be addressed to the deputy chief censor. The covers of the enclosed letters will be left open by the sender.

The copyright of the green envelope is vested in the Crown; the use of any imitation of it is an infringement of the copyright.

2. Special arrangements will be made for the censorship of letters in foreign languages, which, when they cannot be censored in the writer's unit, will be sent under cover to the deputy chief censor.

### 86. Addresses

1. The correct postal address of his unit will be made known to every soldier. No addition to this address will be permitted. In case of doubt regarding the correct military postal address of any unit the local army postal authorities should be consulted. The use of a civil address is forbidden.

2. Writers' addresses may not be given on postcards, nor is the use of stationery permitted which is headed, embossed, or printed with any matter calculated to disclose the location of the writer or of any unit.

3. The rules given above for the addresses and subject-matter of correspondence will be applied equally to packages and parcels, whether sent by post or by other agencies. In all cases where such packages are sent otherwise than by the postal service they will be addressed "c/o The Military Forwarding Officer," but in all other respects the addresses will conform to the regulations for postal correspondence.

### 87. Disposal of private diaries and memoranda

1. Private diaries kept by men may contain much information of value to the enemy, and their despatch

through the post is forbidden. As a result, such diaries are frequently kept by the writers on the person or in kits, where they are liable to capture by the enemy, and are thus a source of danger.

2. To minimize such risks, private diaries and memoranda will be collected and sent periodically under unit arrangements to the nearest censor officer for transmission to regimental record offices, where they will be stored. Private diaries of units not possessing a regimental record office will be sent for storage to the War Office. Private diaries, before being sent away by units will be enclosed in sealed covers marked:—

“Private diary of.....

(Rank, Name, and Unit).....date.....”

3. Units will thus dispose of all private diaries:—

- i. Before going into battle, or into any situation or for any duty which may entail contact with the enemy.
- ii. If attack by the enemy is threatened.
- iii. In all other cases fortnightly.

## CHAPTER XIII

### PASSAGE OF WATER OBSTACLES, FIGHTING IN WOODS AND VILLAGES

#### 88. General

Infantry will often be faced with operations involving the passage of a water obstacle, or fighting in woods and villages.

These types of operation possess certain characteristics of their own and it is necessary to consider briefly the action of infantry when engaged in them, though the principles of section leading given in previous chapters still hold good.

#### 89. The passage of water obstacles

1. **Action of leading troops.**—On encountering a water obstacle commanders of the leading platoons and



sections will make every effort to obtain a footing on the far bank. Energetic action by the leading troops may prevent the enemy completing his demolition programme.

2. If the obstacle is shallow, the leading troops should wade across. (*See Right or Wrong?*, 1937, page 47.) If wading is impossible existing resources must be utilized to the fullest extent. The whole line of the river must be searched by patrols to see whether a bridge has been incompletely demolished, a footbridge left intact by the enemy, or boats left on the near side of the river.

Even if patrols cannot find any means of crossing they should supply valuable information and so assist the commander in making the detailed arrangements necessary for the subsequent crossing.

**3. The points on which information are required are:—**

- i. Enemy positions.
- ii. Information about the river, width, depth, current.
- iii. Nature and slope of banks and bottom. Height of bank above the water.
- iv. The existence of islands, weirs or sandbanks.
- v. Whether there are subsidiary obstacles such as wide ditches.
- vi. Approaches to the river bank for men and wheeled transport, and whether these are concealed from enemy observation on the far bank.
- vii. View points, and the stretch of water that can be seen from each point.

**4. Service equipment.**—If no means of crossing exist the following types of service equipment may be used:—

*i. Reconnaissance boats. Description.—*

A small rubber boat, provided with a foot pump and two short oars or paddles. The boat can be blown up in 5 minutes, and will carry two soldiers fully equipped, also a light machine gun. Before inflation it is carried in a kitbag 1 ft. diameter and 2 ft. 6 ins. long. It is

very light and after inflation can be carried easily by one man.

*Employment.*—These boats are expendable. They are used for reconnaissance purposes by leading patrols and scouts.

ii. *Folding assault boat. Description.*—

A wooden boat 12 ft. long and 4 ft. 9 ins. wide, with canvas sides. For carriage in motor transport, the sides fold down flat on to the bottom of the boat. It will take 9 soldiers fully equipped, i.e. one complete section, with two additional men to bring the boat back to the near bank when the section has landed (*see* para. 7, ii, below). It is comparatively light and can be carried by 3 men.

*Employment.*—These boats will be used to ferry the assaulting troops across. They are not expendable and will be paddled back to the near bank after each successive formation has disembarked.

iii. *Kapok assault bridging.*—This type of equipment is fully described in the Manual of Field Engineering, Vol. I (All Arms).

When the leading troops have succeeded in occupying a position on the far bank, kapok assault bridging may be used for the passage of further infantry formations. Its main disadvantage, as compared with the boats described above, is that it acts as a bottleneck thus preventing the leading infantry from crossing on a wide front. On the other hand, once protection has been established on the far bank, it enables reserve formations to cross much more rapidly than would be the case if boats were employed.

All N.C.Os. must understand thoroughly the employment of these three types of equipment.

**6. N.C.Os. in charge of sections of the assault troops detailed to cross by folding assault boats.—**

i. Supervise the erection of the boat at the forming up position.

ii. Detail the men who are to paddle the boat across—four to six men will be required. (Two of these men will have been attached to the section and will act as the permanent crew of the boat; when the section



has landed they will paddle the boat back to the near bank.)

iii. Indicate to each man his position in the boat and the order in which he will enter it. This should be practised on dry land prior to the crossing. Two men without paddles should be detailed to crouch in the bow ready to leap ashore as soon as the boat approaches the far bank.

iv. Detail the equipment that is to be carried. As a rule the section will be fully equipped for movement (*see* Sec. 13).

v. The N.C.O. must be certain that he knows the route from the forming up position to the point on the river bank where the boat is to be launched, and that there are no obstacles in the way. The route must be cleared and if necessary marked.

vi. The complete plan must be explained to the whole section. This will include a description of the forming up position on the far bank; the signal for the advance to the objective; the location of the covering troops who cross in advance; a description of the objective and the action to be taken when it is reached.

vii. If compasses are available, compass bearings should always be taken.

N.C.Os. must insist that all arrangements prior to the crossing are carried out in complete silence; no lights or smoking should be allowed.

## **90. Points to be observed when fighting in woods**

1. **General.**—The progress of an attack through woods will be slow and laborious. Consequently they should be avoided by attacking troops. But even though the main attack may have been so directed to avoid passing through wooded country, this must be eventually cleared by troops detailed for the purpose. Owing to the reduced visibility and enclosed nature of woods, the support given by other arms such as artillery and armoured fighting vehicles will be small. Fighting

will therefore be mainly between the opposing infantry. Success will depend on resolute leading and a high standard of training both in field craft and skill at arms.

**2. Method of advance.**—Objectives should be lines (roads, tracks, streams, clearings, etc.) which can be easily recognized on the ground, and along which touch can, as necessary, be re-established. The distance between them should not be too great and the progress of troops operating on neighbouring routes should be co-ordinated step by step, liaison being achieved by patrols meeting at pre-selected places. Fronts should be relatively small and reserves kept closer to hand than in open country. Touch with platoon headquarters must be maintained, and every opportunity taken to reorganize both for the purpose of control and for checking the direction of the advance.

The rate of advance will be slower than in the open as the attack will consist of a methodical advance from objective to objective.

No definite rules can be laid down, applicable to all cases, but section commanders should bear the following points in mind:—

- i. Owing to reduced visibility, there is always the danger of ambush, so that special vigilance is essential. On the other hand, the enemy may also be ambushed and surprised. Section commanders must remember that because of the reduced visibility commanders in rear will have little idea of what is going on except from information sent back by those in front.
- ii. It is difficult to keep direction when moving.
- iii. It is difficult to keep touch with neighbouring sections.
- iv. Sounds are magnified in woods and bush though it is difficult to detect their direction; it is therefore important to move carefully and silently.

### **3. Formations.**—

- i. Extensions, intervals and distances will depend on visibility. The leading companies will as a rule be protected by sections extended



in line followed by section or platoon columns. In very thick woods connecting files will be necessary.

ii. Sections should be disposed so as to reduce the risks of being surprised by an ambush. If the undergrowth is not too thick, it is better to move off a path, and close to it; in any case, scouts should move ahead of the section, the distance varying with the visibility. When moving away from paths, extended line is the most suitable formation if the undergrowth is not too thick. In heavy undergrowth, file or single file may be necessary, though in these formations the section is not well placed to avoid ambush. Close control by the section commander is necessary, and the men of the section should always be in sight of each other.

iii. When crossing a clearing or path which may be under view of the enemy, it is best to do so in one rush; the clearing should first be reconnoitred.

iv. Special care must always be given to the flanks and rear.

v. The maintenance of direction and touch require constant attention. Men experienced in wood and bush craft develop an instinct for keeping direction.

vi. If a section is surprised at close quarters, the most effective and safest plan is to rush the enemy; this applies especially to uncivilized enemies.

vi. When debouching from a wood, sections should not halt on the edge, which will often be subjected to heavy fire by the enemy. They should be reorganized before the extreme edge of the wood is reached, so that they can debouch into the open rapidly.

**4. Fire discipline.**—Fire discipline and fire control are particularly important in woods; otherwise there is a danger that sections may fire into each other, owing to loss of direction and poor visibility.

## **91. Points to be observed when fighting in villages**

**1. General.**—Infantry will often be detailed to mop-up the enemy remaining in a village after the main attack has passed. Street and house-to-house fighting is always difficult for the attacker, and success will depend largely on the initiative of section commanders.

The following paragraphs may be of assistance to junior leaders engaged in operations of this nature.

### **2. When advancing through a village.—**

- i. The right of the road is usually the safest side on which to move as it is difficult for riflemen in houses to bring fire to bear on this side without exposing themselves to view.
- ii. Whenever possible get a light machine gun into a window or on to a roof top to give covering fire while the remainder of the section advances along the road.
- iii. Formations will depend on circumstances, but as a general rule two scouts should precede the section, their duty being to watch the windows and roofs on the opposite side of the street and to open fire as soon as any enemy appear. Similarly two men should follow the section, ready to deal with anybody opening fire after the section has passed.
- iv. Remember that streets are not always the best line of advance, casualties will often be saved by moving through backyards and gardens.
- v. The 2-inch mortar and hand grenade will be found most useful in effecting an entry into a house or dealing with barricades.
- vi. Houses must be cleared systematically. Do not forget the cellars. Before entering a house each man in the section should know his particular task. It is dangerous to delay in the doorway.

### **3. When defending a house.—**

- i. Always occupy the roof.



- ii. Doors must be barricaded, but means of rapid exit should be provided.
- iii. Examine the cellars to see whether an opening is available from which fire may be opened on the enemy from an unexpected direction.
- iv. All entrances should if possible be covered by fire from other houses (mutual support).
- v. If time is available, buildings should be loop-holed and windows sandbagged; communications should be improved by knocking holes in walls between houses and gardens, so that movement is possible without entering the street.

## CHAPTER XIV

### MESSAGES, REPORTS AND ORDERS

#### 92. General

1. Forward troops act as the eyes of the commander and must inform him of the progress of the operation by frequent messages and reports. The fact that no enemy is in a certain area may be just as important as if the enemy had been encountered.

It is often difficult for section commanders who are busy controlling their sections to find time to send back reports, but *time must be made* as without information superior commanders are helpless. The successful outcome of every operation depends on the commander having accurate information. On encouraging a fresh situation section commanders should first take the necessary action and then report what action they have taken and where the sender is located.

N.C.Os. must therefore know how to:—

- i. Write a short simple message.
- ii. Send a verbal message.
- iii. Make a verbal report.

In all cases it is essential that the message or report

should be clear and accurate. Otherwise it may be misunderstood and so be valueless or even dangerous.

### 93. Written messages

1. If no message form (A.F. C2128) is available, messages may be written on any paper.

2. A written message should be sent whenever practicable, as there is always the possibility that a verbal message will be wrongly delivered.

3. The following form should be followed in writing a message:—

To 3 Pl. (Note (a)).

From 11 Sec. (Note (a)).

No. 3 (Note (b)). Day of month 10 (Note (c)).

---

Have reached BLACK KNOLL No enemy in sight.

---

1530 (Note (d)).

(Note (e)).

T. Atkins,

L/Cpl.

Notes :—

(a) The message should be addressed to the **unit**, and not to anyone by name. Similarly the **unit** (in this case No. 11 Section), is written after the word "FROM."

(b) Each message sent should be given a number.

(c) Day of month only need be filled in.

(d) Time should be added or the message loses much of its value.

(e) Message signed by sender with name and rank only.

### 4. Instructions for compiling messages.—

i. *The body* of the message should be brief and accurate. The writing must be large and clear so that it can be easily read even in bad light.

ii. *Places*.—Block capitals will be used for all place names. If maps are available, map references should be given. When describing a position the four cardinal points of the compass will be written in full, e.g.

SOUTH of ALDERSHOT, NOT S of  
ALDERSHOT.



Intermediate points may be abbreviated, e.g.  
S.W. of ALDERSHOT, NOT SOUTH WEST  
of ALDERSHOT.

When indicating a position with reference  
to a letter which appears in a place name on  
the map the following method will be used.

S.W. of S in ALDERSHOT, NOT S.W. of S. of  
ALDERSHOT.

Where there are two similar letters in the  
name, the letter to which reference is made  
should be underlined, e.g.

SOUTH of the first A in CAESARS CAMP.

Personal names, regimental names and the  
word NOT will also be written in block  
capitals.

iii. *Times*.—The 24-hr. clock system will be used  
when describing times, e.g.

1200 hrs.	..	..	..	noon.
0900 hrs.	..	..	..	9 a.m.
2130 hrs.	..	..	..	9.30 p.m.
2400 hrs.	..	..	..	midnight.

5. The above instructions have been compiled as the  
result of considerable experience, with the object of  
making messages as short as possible and at the same  
time eliminating the chances of a misunderstanding.  
This form should therefore be used. There is a  
tendency among N.C.Os. to refrain from sending mes-  
sages because they may be a little uncertain of the form  
of the message, abbreviations, etc. Section commanders  
must remember that it is the contents of the message  
that counts and *not the form*: superior commanders  
will be far more annoyed at receiving no messages than  
at receiving those which may not be in the correct  
sequence or wording.

#### 94. Verbal messages

1. When it is impossible to send a message in writing,  
a man must be sent to deliver it verbally.

In this case, the form should be the same as for a  
written message, i.e.—

To

From

The message

The time

2. Verbal messages should always be short.
3. The section commander should:—
  - i. select the most intelligent man available to take the message;
  - ii. think out his message, so that he can give it to the messenger without hesitation;
  - iii. dictate it slowly and clearly;
  - iv. after a pause, make the messenger repeat it *twice*, to ensure that he has memorized it;
  - v. tell the messenger where he is to take the message, and what route he is to follow.

### 95. Verbal reports

1. A verbal report must be short and clear. Therefore the section commander must:—
  - i. Think out beforehand what must be reported.
  - ii. If there is time, write notes, so that no important point will be forgotten.

2. The report should be spoken clearly, slowly and without hesitation. No one can make a good report when flustered or out of breath, and the officer or senior N.C.O. to whom it is to be made will always allow the bearer of the report or message time to recover his breath and think out what he has to say.

If the ground is in view, a N.C.O. making a report should point out the details on the ground; if not, and a map is available, he should use the map to make his report clear.

### 96. Verbal orders

These are orders issued verbally to subordinates so that they may act on them. They should be given out in the logical sequence outlined below. This helps the person giving the order to ensure that nothing is omitted; at the same time the recipient being used to this sequence, can grasp the details with the minimum of delay. Section commanders will often find that time does not permit of all these headings being issued in the correct



sequence nor may the situation call for it. In fact the shorter the order the better will be the results. Even so N.C.Os. must know the sequence and before issuing orders they should run through the headings in their mind to see that nothing relevant has been left out.

## 1. INFORMATION.

(a) **Regarding the enemy.**—Only give information likely to help recipients to carry out their tasks.

(b) **Regarding our own troops.**—As for (a). In addition, necessary information as to what other troops are doing should be put in this para.

## 2. INTENTION.

State clearly and briefly *what you* intend to do with *your* men but do *not* give details of *how you* intend doing it.

## 3. METHOD.

Describe clearly how you are going to carry out your intention.

The following points would usually be included in this paragraph.

### **In attack:**

Route, formation, first bound, scouts, objective, action on capture of objective, etc.

### **In defence:**

Task of section, arrangements for fire, sentries, A.A. and anti-gas measures: allocation of digging tasks, etc.

## 4. ADMINISTRATIVE ARRANGEMENTS.

Any alteration in the normal equipment of the section should be indicated here, also location of platoon truck, supply of ammunition, and medical arrangements.

## 5. INTERCOMMUNICATION.

Position of platoon headquarters.

Light signals.

Orders to man selected as a runner.

After giving orders it is most important to ensure that they have been really understood. This can be done by asking one or more of the men definite questions bearing

on the orders that have been given: for example, "What is the route?" "Which is the first bound?" "Where is company headquarters to be located?"

## APPENDIX

### WIRING DRILL—DOUBLE APRON FENCE

#### I. General

1. When in proximity to the enemy, all parties work on the near side of the fence. The drill given below, for erecting 50 yards of fence, is applicable to these conditions, and should be known by all officers and N.C.Os.

2. Although parties of one N.C.O. and ten men are laid down as standard wiring parties, wire can be erected rapidly and silently by night by parties of any number from 6 to 15. The sequence of putting on the wires must be the same whatever the size of the party.

Men must always work in pairs, and on completion of one task, they must return to the head of the work where they can see, or will be told by an N.C.O., what the next task for them is.

3. In every case where two numbers are shown running out the wire, one man carries the drum and the other man makes the knots. On long tasks they will change round.

When full drums of 130 yds. of wire are used, the N.C.O. stands at the end of the fence and cuts the wires as they are finished off.

4. The man-loads of stores given in these drills are those for the numbers when carrying up the stores from the dumps to the head of each task (i.e. for a short distance), and when actually doing the drill. For long carries, with larger carrying parties, the loads will require adjustment.

Any spare men should be used to help the numbers who lay out and fix the diagonal wires, as these are always much slower than anyone else.



5. It saves time and makes it unnecessary to cut the wire, if, before making a double apron fence, the wire is rewound into coils of 65 yds. each.

When laying out wire, the man carrying the coil should hold it so that the wire comes off from underneath.

If the wire catches, the coil will then be pulled downwards and not up into the man's face.

It is also less tiring for the hands.

6. Wire which is used for practising wiring soon gets kinked. It can be straightened by stretching and hammering out the kinks with wooden hammers.

## 2. With screw pickets

### 1. i. Party—

1 commander and 10 men.

### ii. Stores—

			<i>Man-loads</i>
20 long screw pickets	..	..	5
40 short screw pickets	..	..	5
9 (65 yds.) coils barbed wire	..	..	9
2 (130 yds.) coils barbed wire (for diagonals)	..	..	4
			—
	Total	..	23
			—

### iii. Tools—

Windlassing sticks	..	..	..	10
Cutting pliers	..	..	..	1 pair

## 2. 1st Duty—Carrying stores.—

Nos. 1 to 10, inclusive, make two journeys out.

N.C.O. directs.

Nos. 6, 7 and 10, make a third journey and bring up remaining stores.

## 3. 2nd Duty—Pickets.—

1, 2, 3, 4, 5, long picket Nos.

1, 2 screw in long pickets, three paces apart (7 ft. 6 in.), along the tape; 3, 4 and 5 lay out pickets in position and then help 1 and 2 to screw them in.

6, 7, 8, 9, 10, short picket Nos.

6, 7, screw in short pickets opposite the intervals between long pickets, and 6 ft. from the fence on each side; 8, 9 and 10 lay out pickets in position and then help 6 and 7 to screw them in.

#### 4. 3rd Duty—Wire.—

Nos. 1, 2, 3 and 4, front diagonal wire (Nos. 1 and 3 run out wire, No. 2 fixes wire to long pickets and No. 4 to short pickets).

Nos. 5 and 6 bottom wire on front apron.

Nos. 7 and 8 centre wire on front apron.

Nos. 9 and 10 top wire on front apron.

Nos. 1 and 2 bottom wire on fence.

Nos. 3 and 4 second wire on fence.

Nos. 5 and 6 top wire on fence.

Nos. 7, 8, 9 and 10 rear diagonal wire (Nos. 7 and 9 run out wire, No. 8 fixes wire to long pickets and No. 10 to short).

Nos. 1 and 2 top wire on rear apron.

Nos. 3 and 4 centre wire on rear apron.

Nos. 5 and 6 bottom wire on rear apron.

#### 3. With angle iron or wooden pickets

##### i. i. Party—

1 commander and 10 men.

##### ii. Stores—

	<i>Man-loads</i>
20 long angle iron or wood pickets ..	5
40 short angle iron or wood pickets ..	5
9 (65 yds.) coils barbed wire ..	9
2 (130 yds.) coils barbed wire (for diagonals) .. .. .	4
4 mauls or sledge-hammers .. .. .	1
	—
Total ..	24
	—

##### iii. Tools—

Windlassing sticks .. .. .	10
Cutting pliers .. .. .	1 pair



## 2. 1st Duty—Carrying stores.—

Nos. 1 to 10, inclusive, make two journeys out. N.C.O. directs. No. 3 takes out mauls or hammers on his second journey.

Nos. 7 to 10, inclusive, make third journey and bring up remaining stores.

## 3. 2nd Duty—Pickets.—

Nos. 1 and 2 lay out all long pickets at 7 ft. 6 in. intervals along tape. N.C.O. paces out.

Nos. 3 and 4 drive in 8 long pickets.

Nos. 5 and 6 drive in 12 long pickets.

(Note.—Even Nos. hold pickets and odd Nos. drive them in.)

Nos. 7 and 8. No. 8 lays out 16 short pickets (1 at end of task and 15 along the front, and 6 ft. from fence and opposite intervals), and then assists No. 7 in driving them in.

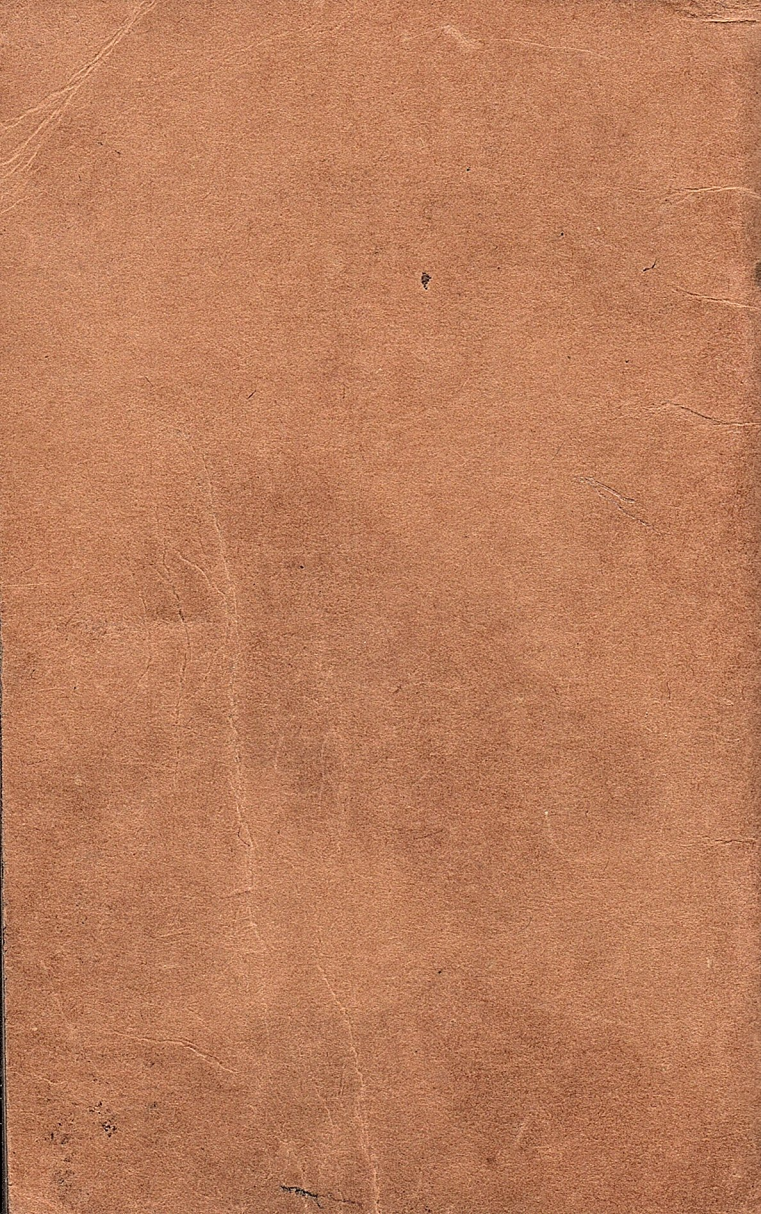
Nos. 9 and 10. No. 10 lays out 24 short pickets (19 along rear and 6 ft. from fence, 1 at far end, and 4 along the front), and then assists No. 9 in driving them in.

## 4. 3rd Duty—Wire (same as with screw pickets, Sec. 2, above).

(Note.—Diagonal wires are windlassed at the pickets by the men who make fast the wire to the pickets.)









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